WINTER

IN THE

ARCTIC REGIONS.

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I. WINTER IN THE OPEN SEA.

II. WINTER IN A SECURE HARBOUR.

III. WINTER IN A SNOW-HUT.

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TO

CAPTAIN SIR GEORGE BACK, R.N.

ETC. ETC. ETC.,

Whose name is honourably distinguished among the Geographical Discoverers of the present age, and who, in the experience of eight Winters in the Arctic Regions, has encountered their peculiar dangers in the severest and most awful form, this slight tribute of respect is, with his permission, inscribed, by

The Compiler.

London,
May, 1846.

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SHIPS BESET BY ICE.

INTRODUCTION.

NOTICE OF THE ATTEMPTS MADE TO DISCOVER A NORTH-WEST PASSAGE FROM THE ATLANTIC TO THE PACIFIC.

If the reader will refer to a map of the world he will notice that the continents of Europe and Asia terminate in the ocean, at about the seventieth or eightieth degree of north latitude. The discoveries of Hearne, Mackenzie, Parry, Franklin, Back, and others have rendered it extremely probable that the whole of the northern coast of North America has a similar termination, although it was long supposed that this vast continent extended in an almost unbroken mass towards the Pole, and as such it was depicted upon maps. So long ago as 1772, Hearne commenced the career of discovery, which has so honourably distinguished British navigators, by exploring the Copper-mine River

until it issued in the great Arctic Ocean. In 1789, Mackenzie made an important addition to geographical knowledge by sailing down the magnificent river, which now bears the explorer's name, until he arrived at the Polar Sea, in lat. 70°, and long. 136°, W. Since the discovery of the mouth of the Mackenzie River, the shores of the Polar Sea have been explored for several hundred miles, both to the east and to the west. Towards the east, the farthest known point is one called *Point Turnagain*, from the circumstance that at this place, Franklin, Richardson and Back, *turned* on their terrible expedition of 1820. Between this point and the discoveries of Ross and Parry, in the seas connected with Baffin's Bay, a portion remains unexplored. Westward of the mouth of the Mackenzie River, Franklin and his former companions, in 1826 explored three hundred and seventy miles of coast extending almost in one direct line, not far removed either to the north or south of the seventieth parallel of latitude. The utmost point attained by him was a place called *Return Reef*, leaving a space of one hundred and sixty miles unexplored. In the year 1837, however, an expedition, sent out in the previous year by the Hudson's Bay Company, surveyed this

unexplored gap ; so that from this time the whole of the coast of North America to the west of the mouth of the Mackenzie River, was delineated on our maps, and the memorable problem of a North West-Passage was thus far solved ; but it still remained to be discovered whether the sea was open to the east of the mouth of the Mackenzie River, from Point Turnagain to the Strait of the Fury and Hecla, which was discovered and partly explored by Captain Parry.

As the glory of all these peaceful enterprises belonged peculiarly to England, it was natural that an anxiety should be felt to complete these discoveries by a survey of this coast. The various expeditions fitted out by government had produced results full of interest to geographical and natural science, had furnished narratives of surpassing interest, and developed the noble and heroic qualities of the British sailor, as completely as if he were contending with his country's foes ; still, the great object of these expeditions had not been attained. The commercial value of a North-West Passage, if such could be proved to exist, had long ceased to occupy attention ; but it was most desirable to put an end to the various doubts and conjectures

which, during more than three hundred years, had occupied the public mind. Government had declined to fit out any more expeditions, when, in 1829, Captain Ross, supported by Sir Felix Booth, set out on his expedition, hoping to find a passage through Prince Regent's Inlet. This expedition was unfortunate in the extreme: Captain Ross lost his ship, and he and his crew were compelled, during four long years, to inhabit these dreary solitudes. In England they were given up as lost; when in 1833, Captain Back volunteered, as a sort of forlorn hope, to go in search of his lost companions: an expedition was accordingly fitted out, partly with the assistance of government and partly by private subscription. It will be remembered that soon after Captain Back started, Captain Ross and his crew were providentially rescued by a whaler, which had been tempted by the fineness of the season, much further north than usual. Intelligence to this effect was conveyed to Captain Back, with instructions to follow up the second and subordinate object of the expedition, viz., the survey of part of the coast as far as Point Turnagain. This brave officer returned in 1835, having made many interesting geographical discoveries,

(including the *Thlew-ee-choh* or Great Fish River, now properly called *Back's* River, which was explored from its source, a small lake named after H.R.H. the Duke of Sussex, to its termination in the sea, comprising a distance of upwards of five hundred geographical miles;) but still he was unsuccessful in the grand object of all these enterprises. His course, however, promised so well, that in 1836, Government was induced to entrust him with the command of an expedition in H.M.S. Terror, with instructions to proceed to Repulse Bay or Wager Inlet, on the north-western shore of Hudson's Bay; thence an exploring party was to cross over the supposed isthmus to the Arctic Sea, with the hope of coasting along and determining the outline of the unexplored coast. This expedition failed in attaining any one of its objects from causes which will be more particularly referred to presently.

Amid all these discouragements, the prosecution of Arctic discovery is not abandoned. An expedition was fitted out by Government about a year ago, and placed under the command of the veteran Arctic explorer, Captain Franklin, who is at this very time wintering in the frozen

regions. While waiting the results of his exertions, let us consider what are the dangers and difficulties to which the British seaman is exposed while enduring the severities of an Arctic winter. In the treatment of this subject, three distinct narratives will be presented to the reader; in the first of which we are enabled to offer an abstract of the last voyage of Captain Back, alluded to above, which is not popularly known. This will convey a vivid idea of the horrors of an Arctic winter, and the reader, while sitting by his warm fire-side, will not be the less prepared to sympathise with dangers and sufferings of no ordinary kind, but which, whatever they are, British sailors are wont to overcome with bravery, or submit to with patience.

But it will add to the interest of the subject if we give a few particulars respecting the chief production of these regions, namely, ice.

The reader is probably aware that sea-water is converted into ice, in a somewhat different manner from fresh water. When a freezing wind blows over the surface of the ocean the motion of the waves prevents solid ice from being at first formed, but the water is congealed into a spongy mass

called *sludge ;* this has the effect, to some extent, of stilling the waves, and it forms itself into small round plates, of about a foot in diameter, which, according to Captain Lyon's simile, have the appearance of the scales of gigantic fishes. These plates, (called *pancakes* by the sailors,) by adhering together become a solid surface of ice, which, under the influence of the frost, extends in every direction, until, at length, a *field* of ice is formed which sometimes occupies an area of several hundred square miles, increasing in thickness as the winter advances.

During the winter of about nine months, all navigation is of course suspended in these frozen regions. The warmth of the summer's sun gradually softens the icy floor, and the first strong wind causing a swell in the ocean, detaches the fields of ice from the shores, and being once set afloat, they are broken by the violence of the winds and currents into smaller fields, called *floes*, the extent of which can be distinguished from the mast head of a ship. When the field is broken into pieces not exceeding forty or fifty yards across, the whole is called a *pack :* when the pieces are broad, they form a *patch*, and when long and

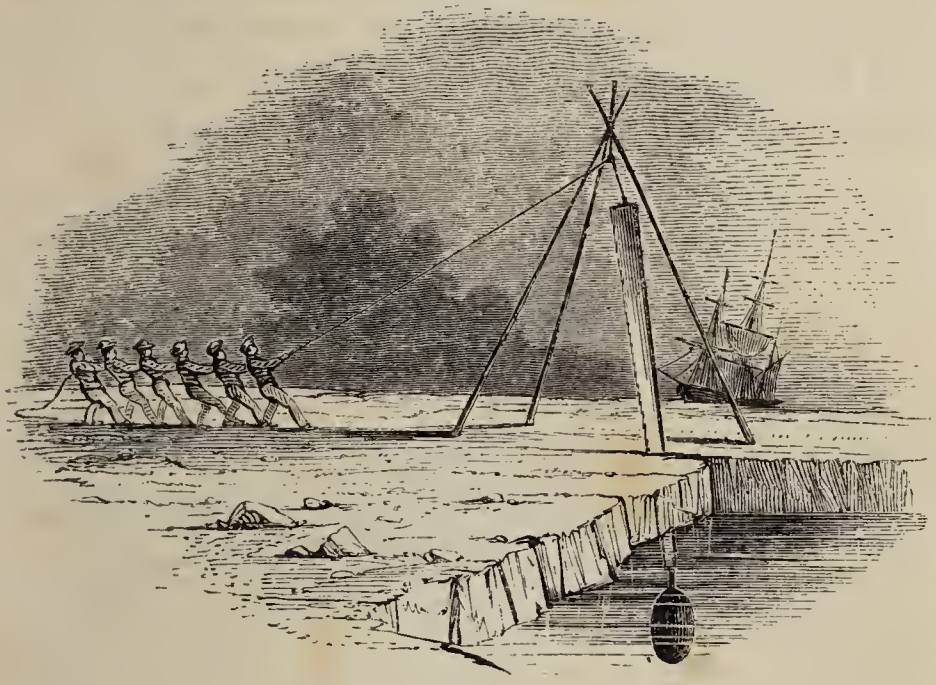
narrow, a *stream*. When a ship can sail freely through these masses the ice is said to be *loose* or *open*, and is called *drift* ice.

The surface of the ice in the Arctic Regions is by no means level. The enormous fields and floes, driven about by the violence of winds and currents, sometimes approach in opposite directions and strike against each other with the force of millions of tons, forcing up large masses of ice ten, twenty or thirty feet above the common level, and forming what are called *hummocks*. When a ship is placed between these opposing masses it may be crushed like a walnut, or be lifted completely out of the water, and be placed high and dry on the ice.*

The presence of fields and other masses of ice is often discovered at a great distance by a glare of light in the horizon occasioned by a reflection from the surface of the ice against the opposite atmosphere. This appearance, called *ice-blink*, points out to the experienced navigator twenty or thirty miles beyond the limit of direct vision, the extent and quality of the ice. Should any dark spots or patches occur in it, he knows that they correspond

* See page 22.

to certain openings of water, and endeavours to make his way in their direction. This may often be done by cutting a channel with the ice-saw,

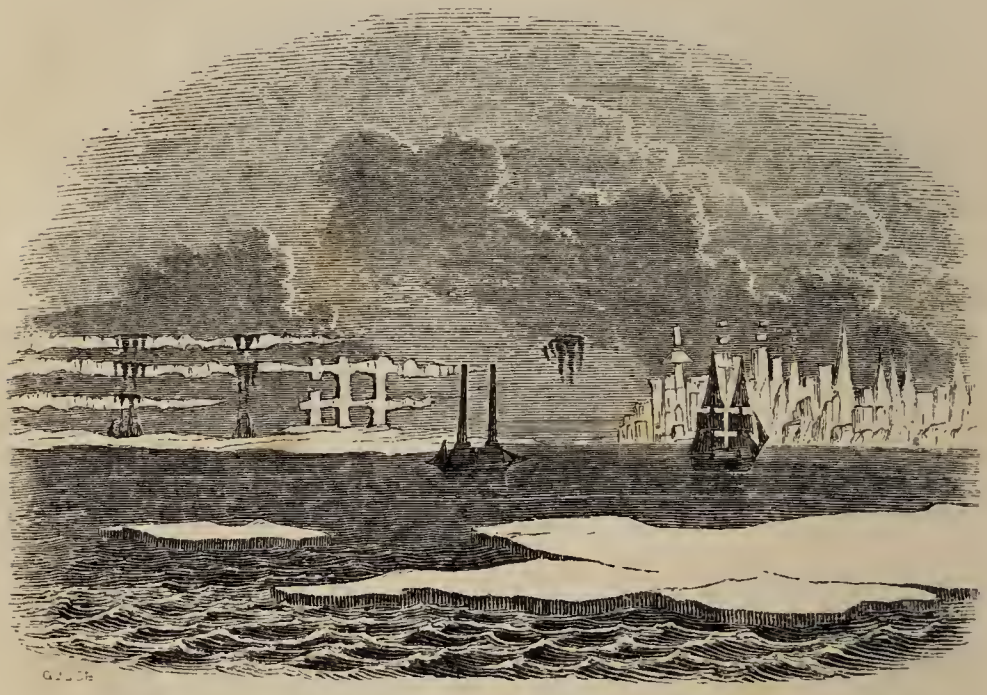


ICE-SAW.

which is a long saw with a weight attached to the lower part, while the upper part is suspended by a rope passed over a pulley fixed to a triangle of spars. A party of men run out with the rope by which the saw is moved up, and on running back again the saw falls by its own weight; by

which means the ice is cut through, the triangle being moved forward from time to time.

The presence of open water is also indicated by the vapour which rises from it being condensed by the cold into a visible form resembling smoke, and on this account it is called *frost smoke*. This appearance is shewn in the cut at page 18.



REMARKABLE EFFECTS OF REFRACTION.

The ice-blink sometimes produces remarkable effects of refraction on the neighbouring coast,

giving it the appearance "of an extensive city, abounding with the ruins of castles, obelisks, churches, and monuments." The hills sometimes appear surmounted by turrets, battlements, spires, and pinnacles; while others subjected to one or two reflections exhibit large masses of rock, apparently suspended in the air. These forms are also frequently changing; that which seems to be a castle, a cathedral, or an obelisk, by expanding horizontally may appear to unite opposite hills by a magnificent bridge of a single arch. Some of these appearances are shewn in the following engraving, which is from a drawing made by Captain Scoresby on the coast of Greenland. On one occasion that gentleman saw an inverted ship in the air, and on examining it through his telescope, he could distinguish every sail, the general rig of the ship, and its particular character; so that he confidently pronounced it to be his father's ship, 'the Fame,' which it afterwards proved to be, although at the time it was thirty miles off, or about seventeen miles beyond the horizon, and some leagues beyond the limit of direct vision.

H. M. S. TERROR THROWN UP ON THE ICE.—FROST SMOKE IN THE DISTANCE.

PART I.

WINTER IN THE OPEN SEA. — THE ADVENTURES OF H.M.S. TERROR BESET BY ICE IN HUDSON'S STRAIT.

It sometimes happens when the summer is unusually cold and short, that the ice of an Arctic winter is not broken up during the following summer; so that the second summer would find the accumulated ice of two winters. Such appears to have been the case in the summer of 1836; when on the 14th of June, H.M. ship Terror* left Chatham and proceeded at once on her voyage to Hudson's Strait, where a contest commenced between the ship and the ice, which was destined to last more than fourteen months. The drift ice in

* The ship was commanded by Captain Back; his lieutenants were Smyth, Stanley, and M'Murdo; Gore, M'Clure, and Fisher, mates; Marcuard, extra mate; Donovan, Surgeon; Mould, assistant surgeon; Lawes, clerk in charge; and Saunders, acting master. The ship's company consisted of twelve officers, four warrant officers, thirteen petty officers, and forty-four seamen and marines, making a total of seventy-three.

the strait was very heavy, and it was not without difficulty, and at a great sacrifice of distance, that the immense masses could be steered clear of; and even with the greatest caution, the ship would sometimes drive on them with a concussion that made all the bells ring, and nearly threw those below from their chairs. Every attempt to reach Southampton Island was thwarted by immense bodies of ice. It soon became apparent, that the ice of the previous year, 1835, had not been broken up at all, and that, having, with the accumulations of the following season, been detached from its bands by the storms of spring, it had been driven by the winds and the currents from the bays and harbours of the north, to the place where the ship encountered it. The two distinct kinds of ice, the old and the new, could readily be distinguished, the one being massive, irregular and dirty, with huge piles tossed up in picturesque confusion, — the other light, clean, and comparatively smooth.

By the 18th of August they had reached lat. 65° or 66°, when the ice became so close, that there was but one hole of water to work the ship in. At length the ice became solid and unbroken,

and appeared from the crow's-nest* to be joined to the land, and stretching thence west and north, glared in one undivided mass to the utmost limits of the sight. The most experienced seamen (many of whom had been in the Greenland trade) declared they had never beheld such heavy ice. It seemed to consist of numerous floes wedged together, the whole surface so ragged and piled up, that the height of the ridges frequently exceeded fifteen feet, and no human being could have travelled far over it. To those unaccustomed to Polar navigation, the prospect was most discouraging, all progress in this direction being apparently stopped; but the more experienced looked forward to a change of wind, to the tide, or a current, which, in a few hours often produces so sudden and marvellous a change in the scene. Accordingly, about midnight, large pieces of ice, near the pack, were observed to be drifting away; and fearing to be hemmed in, the ship was warped towards a lane of water. This was gained in an hour; and as there was

* The crow's-nest is a tub lined with green baize, the bottom opening like a trap door. It is fixed near the summit of the foretop mast, and of course commands an extensive view.

every appearance, from the darkness of the sky, of a continued channel, sail was immediately made on the ship, and to the surprise and joy of all, the impediment was found to have yielded to a greater power, and a path opened, through what seemed to be an impenetrable barrier. "Such," says Captain Back, "are the strange incidents of Polar navigation, which, though less striking than the wild commotions of the earthquake or tornado, are, at all events, calculated to excite gratitude to that merciful Providence, whose protective care is over all his works, in the icy waste, no less than in the thronged city."

The ship made very slow progress, constantly struggling with the ice, tacking continually to weather, or to avoid the floes, and anxiously longing for a breeze. A few whales and narwhals, alone relieved the monotony of the scene; and when night closed in, the ship was still attached to a floe, and lay motionless and dark on the bright bosom of the icy wilderness.

The extensive floes which stopped the ship had, by their mutual pressure in opposite directions, heaped up some ponderous masses to the height of thirty feet. The land looked blue from

GREENLANDER SPEARING THE NARWHAL.*

the distance, and beautifully soft as contrasted with the white cold glare of the intermediate ice around, reflecting by the setting sun the tints

* The narwhal, or sea unicorn, is perhaps the most beautiful animal to be found in the northern seas. It is related to the whale, which

of the intervening masses thrown into the most picturesque groups and forms, — spires, turrets, and pyramids, many in deep shade, presenting altogether a scene sufficient for a time to cheat the imagination, and to withdraw the mind from the cheerless reality of the actual situation.

Thus the ship crept along narrow lanes of water, which now and then opened. At intervals was heard the mournful crashing of the young ice, as it was thrown up in solid foam, and gave token that all was in motion. The weather was very inclement, snow and cold winds prevailing at a time when Captain Parry in this very spot enjoyed, on a former occasion, almost the warmth of summer. The temperature

it resembles in many respects. It attains the length of about sixteen feet, and eight feet in circumference. Its colour is grey above, and pure white beneath, the whole spotted or mottled with a blackish hue. A long spiral horn or tusk of solid ivory projects from the head, which has obtained for the animal the name of *unicorn*. This horn is often eight or ten feet long; it is white, solid as the hardest bone, and is said to be useful to the animal in defending itself from its enemies, and also in procuring its food, which consists of sea-grass, molluscous animals, and fish. Narwhals are most numerous in Greenland, where the inhabitants eat both the flesh and the skin, while the tusks form one of the most valuable articles of export.

of the air was 19°, that is, 13° below the freezing point, so that the startling fact could not be concealed, that the rigour of a premature winter was thrust upon them, at the moment when they were almost in sight of port.

After a wearisome detention, and while the ship remained immoveable, an extraordinary movement in the ice took place, which, with astonishing celerity, dispersed it in shore, so much as to leave a long and wide lane, and it was hoped that a branch of it might have reached the ship. The sails were well filled with a fresh breeze, the strongest hawsers were fastened to the ice, and then hove round by the capstan. The united force was of course very great, and no device was left untried to heave the ship ahead; but so firmly had the sludge been frozen quite round the bends, that she could not be moved an inch. The officers and men were therefore dispatched to the only open water at all near, and with axes, ice-chisels, handspikes, and long poles, began the laborious process of cutting away the sludge that bound the pieces together, and removing them into the clear space. It was often necessary to fasten lines to the heavier masses and haul

them out; and though slipping and tumbling about, yet the light-hearted fellows pulled in unison to a cheerful song, and laughed and joked with the unreflecting merriment of school-boys. Every now and then some luckless wight broke through the thin ice, and plunged up to his neck; another, endeavouring to remove a piece of ice by pushing against a large mass, would set himself adrift with it, and every such adventure was followed by shouts of laughter and vociferous mirth.

Fortunately the wind shifted to the south; the weather became warmer; the work went on cheerily; and as the breeze increased, the sails were hoisted, and forced the head round, when the ship gradually gathered way and went slowly towards land. There was an infinite expanse of ice, but every dark spot of water increased the hope, that an off-shore wind would soon place the ship in a navigable channel. They did succeed in getting into tolerably clear water, and made way for a few miles, but snow and wind came on, and they were again blocked up. Anxious as they were to get near the land, in hopes of finding a navigable channel, they were separated from it some miles by an icy barrier; the soft blue tint

had disappeared; the cold black rocks were seen streaked with snow, and a mantle of the same cold whiteness covered the whole of the head-land.

During several days, the ship lay becalmed; when the wind at length came, it was from the adverse quarter, and it had a direful effect on the shore ice, in which the ship was embedded; every piece being so firmly and closely packed against the other, that there was not a hole large enough to admit of drawing water: yet on the 14th of September, an agitation was noticed among the surrounding ice, and the motion became so violent that what was not crushed by the enormous force, was raised up to various heights, and huge masses with several peaks, to upwards of twenty feet. The ship was severely nipped, and went on drifting with the ice towards the shore. Not a pool of water was visible in any direction, says Captain Back, "and to the mercy of Providence alone could we look for rescue from our perilous situation. None but those who have experienced it can judge of the weariness of heart, the blank of feeling, the feverish sickliness of taste which gets the better of the whole man under circumstances such as these. Not an incident occurred to relieve for a moment the dull

monotony of our unprofitable detention. "Will the wind ever come from the westward?" was the question fretfully asked, and peevishly answered. This one idea had taken entire possession of the mind, and whilst even a doubt remained, no occupation, no amusement, however ordinarily gratifying, had power to please, or even distract the thoughts. Not that this or any part of it was expressed in words, but the feeling was not the less easily detected."

At length the wind did change, and the sails were set, and answering to their power, the ship immediately forged ahead, slowly, indeed, but wherever the ice was smaller, with a speed that brightened every countenance. It was indeed singular to behold the vast ship gliding along without any perceptible water. On approaching Cape Comfort, they expected to find under its lee a lead of water, but the ice was found to be locked in the very base of the rocks, and presented an impassable barrier. The ice was subjected to a grinding pressure; the whole connected mass yielded to the general impulse; and ice and ship were borne helplessly along before the violence of the gale. The wind gradually abated during the

night, and on the morning of the 18th, it was discovered that they had driven past Cape Comfort, and were nearer the coast, which was fearfully forbidding. To the north it presented a towering and perpendicular front, rent into fissures, and jagged with splintering ridges, all deeply black; whilst towards the south it receded from its summit, in round-backed hills covered with snow. A raven, and a little snow-bunting came near the ship, and also an arctic fox, probably lured by the skeleton of a bear, which had been killed some days before on a floe.

On the 20th the wind blew fresh, setting the seaward ice down towards land with more force than had yet been experienced. A floe split in two, and the extreme violence of the pressure curled and crumbled the windward ice up in an awful manner, forcing it against the beam of the ship fully eighteen feet high. The ship creaked as it were in agony, and strong as she was, must have been stove and crushed had not some of the smaller masses been forced under her, and so diminished the strain by actually lifting her bow nearly two feet out of the water. The snow was unceasing. Much ice had been sunk and seemed to be forcing

its way under the lee floe also; for the uplifted ruins, within fifty paces of the weather beam, were advancing slowly towards the ship, like an immense wave fraught with destruction. Resistance was of no avail beyond a few seconds, for what of human construction could withstand the impact of an icy continent, driven onwards by a furious storm! The intensity of the pressure was found in various parts of the ship; the butt ends began to start, and the copper in which the galley apparatus was fixed, became creased; sliding doors refused to shut, and leaks found access through the bolt-heads and bull's-eyes. On sounding the well an increase of water was reported, making hourly pumping necessary. To guard against the worst, provisions and preserved meats, with various other necessaries, were got up from below and stowed on deck, so as to be ready in a moment to be thrown upon the large floe alongside. "To add to our anxiety night closed prematurely; when suddenly, from some unknown cause, in which, if we may so speak without presumption, the finger of Providence was manifest, the floe which threatened instant destruction, turned so as, in a great degree, to protect us against

an increase of pressure, though for several hours afterwards the same creaking and grinding sounds continued to annoy our ears."

Next day the ice began to move, and after several astounding thumps under water against the bottom, the ship, which had been lifted high beyond her line of flotation, suddenly started up and almost righted. One ponderous mass burst from its imprisonment below; when she gained her upright position. "On beholding the walls of ice on either side between which she had been nipped, I was astonished at the tremendous force she had sustained. Her mould was stamped as perfectly as in a die. Astonishment, however, soon yielded to a more grateful feeling,—an admiration of the genius and mechanical skill by which the Terror had been so ably prepared for this service. We had many old Greenland seamen on board, and they were unanimously of opinion that no ship they had ever seen could have resisted such a pressure."

They were only twenty-five miles from the Duke of York's Bay, but could not move on account of the ice and untoward winds, or an endeavour would have been made to get the ship

into a safe place. Birds of all kinds had left, and other animals also, except a solitary seal, espied from the mast head, which, on being pursued, disappeared through a hole in the ice. A party was sent out to endeavour to find a shelter for the ship behind some projecting rock or point, but they were driven back by a snow storm. It was of no use to cut a canal with axes, &c. for the ice filled in as soon as an opening was made. An attempt was made to cut a dock in the pure ice, and had proceeded some way when the ice opened, a lane of water appeared, and the ship tracked along.

They had now been beset a month without the possibility of moving in any direction but where the openings occurred. The ice again closed and heaved the ship considerably on one side, to the no small risk of the part nipped, "which creaked and complained bitterly." The crack again opened, and they got on to within five or six miles of the shore, which would have afforded some shelter; but the ship was fixed here, compelled to endure the furious buffets, which each successive tide brought upon them, and at the mercy of the mighty power that bound them.

As they were again about to cut a dock in the huge floe, a general commotion was perceived, and the entire body, by which they had been hampered, separated into single pieces, then tossed into heaps, or ground to powder whatever interrupted its course; and finally, early in the morning of the 26th, rushed violently up Frozen Strait. The ship bore up well against the hurly-burly, and at daylight the floe had disappeared; it had been broken and scattered with many other ponderous masses, which now lay piled in ruins around. The ship too had been set nearer Cape Bylot. On the 27th the ice was again in motion, one heavy piece driven on by several others, was seen crashing or sinking everything before it: on striking against the ship, it split in two or three directions, raising her at once several feet out of the water, and leaving her bows jammed against the masses ahead. The day was spent in getting out the boats and provisions; but two or three days passed without alteration; they were not above three miles from the shore and yet unable to get the ship there; bays and harbours appearing within reach, and still obliged to be prepared for being wrecked.

On the 18th of October the vessel gradually righted; but the crew was kept on the watch during several days. The cold began to be severe, a thickness of five inches of ice being formed in a single night in the fire-hole.* Preparations for the winter were therefore commenced, and the men were actively employed either in the duties of the ship or on the ice, where healthy exercise was turned to profitable account in constructing paths and one general road towards the shore. On the 23rd, Captain Back put on a pair of snow shoes and made towards land, which he reached after two hours of great fatigue. There was nothing to repay it; a bare jutting piece of granite was visible here and there, snow covered the rest of the land, which was steep and inaccessible—a desolate solitude, which, from the absence of all tracks, seemed to be equally abandoned by men and animals. No shelter was to be found; "and when I reflected on the dangers by which we were encompassed, and the casualties which might befal us, I could not refrain from casting an anxious look towards the ship, whose masts

* A hole kept open in the ice, for drawing water in the event of fire.

alone were in sight above the peaked hummocks, and imploring the protection of heaven."

The 24th October, the day of full moon, brought a change. A gale, which sometimes burst in heavy squalls, cracked the ice and covered it with water, but the pack in which the ship was fixed remained firm; had it not done so the ship would scarcely have escaped the crushing of the consolidated masses around. The ship and the ice continued to drift. Open water was before them, but they had no means of reaching it, being fixed in the solid mass as it were in a block of marble. The officers built snow houses on the ice alongside for various purposes, and among others for an observatory. To add to the discomfort of their dismal situation, the warming apparatus, which was intended to raise the interior of the ship to a comfortable temperature, turned out to be wholly inefficient, and they were therefore reduced to two or three common fires.

They continued to drift about during many days, when, to their astonishment, on the 14th November they found themselves within 3650 yards of the inaccessible cliffs of Cape Comfort, against which it was feared the ice might strike,

break up, and wreck the ship. The extraordinary disappearance of extensive bodies of inshore ice, and the occupation of their places by still heavier ones from seaward, was unaccountable, till it was ascertained that two-thirds of it were actually ground and pressed up to the height of twenty feet in a solid mass against the unyielding rocks. Thus the most fatal consequences might be apprehended, if any untoward fracture of the pack should remove the ship from her present bed.

The ice continued in motion up to the 20th November, but the floe in which the ship was bound remained tolerably secure. Snow walls and galleries were built in different directions from the ship, for the comfort and accommodation of all. They were scarcely completed, when, on the 23rd of December, a furious storm arose, such that no man could face it. Several who endeavoured to perform some duty outside the ship, were instantly frost bitten and obliged to return, and the officer of the watch in merely going from the housing to the taffrail to register the thermometers, had the whole of his face frozen. Not that the temperature was so low as it had been a few days before, for it was then 53° below zero, and now

only 30° below zero, but the rapid abstraction of heat by the wind was beyond endurance, and a very short exposure would have been certainly fatal to the hardiest. The storm raged like a hurricane and covered the ship with snow drift. The topmasts shook like wands, the lee rigging was forced out like a bow, and piles of snow were whirled on the lee side of the housing. As the wind blew directly off shore there was no great cause for apprehension as to the holding together of the floe. On the 24th, the storm abated, and they then found they had been actually driven out towards Frozen Strait, twelve or fourteen miles to the east of Cape Comfort.

In this fearful situation, however, the officers encouraged cheerfulness by introducing various kinds of amusement; among which the most useful was an evening school for the men, which was attended with the happiest results. Christmas eve and evening are described as being "merry;" but with every care the scurvy began to show itself, and it was probably aggravated by the moist and fetid air of the ship. The difference of temperature between the outside and the inside of the ship amounted frequently to 110°, the air on the out-

side being pure and extremely dry. Several of the crew were attacked with an extraordinary rigidity of the muscles of the legs. All who were unable to walk were dragged about on sledges for the benefit of air; those in health were encouraged to play at foot-ball twice a day, and a swing attached to the bowsprit afforded exercise and amusement. When the wind was very strong the crew were confined to the semicircular space inclosed between the snow walls on the larboard side of the ship, and called "The Court-yard."

New-year's day was duly ushered in by sound of bell. The sky was perfectly unclouded, and a bright sun was just seen above the mountains: it was a heavenly calm. The coast was again visible, the ship having been carried eastward with the entire body of ice not less than forty-five miles, so irresistible was the power of a heavy gale and a spring tide over the boundless ranges of ice, which were thrown up around. The floe was again disturbed, and lanes of water, or rather of young ice, were formed within a short distance of the ship. The same substance that had remained firm and unbroken throughout the raging of the storm was in a few hours of calm all shattered and disjointed,

and the sense of security, which a day or two before had cheered them in the midst of their discomforts, was suddenly, and at a season when it was least expected, converted into distrust and apprehension. Such are the strange caprices of Polar navigation. The crashing of the ice was frequently heard, and on the night of the 7th of January, a moderate breeze from the north-west created a terrific din immediately astern of the ship; and so great was the pressure, that the ice was actually ploughed up ten or twelve feet, while the rumbling and crashing underneath and along the surface, prevented the men from taking any rest.

On examining the effect produced on shore by all this commotion among the ice, it appeared that along the beach between the jutting rocks the ice had been forced up full twenty feet; and where the rocks were precipitous, huge masses had been successively lifted up, pile on pile, until they presented the appearance of bergs, for which, indeed, they had been taken. "A stranger combination of ruin and confusion, with the softness and harmony of the most beautiful tints, from the faintest emerald to the deep cerulean blue, it would have been difficult for the most imaginative mind

to have conceived. Then from the sterile summit of the hill to gaze as far as the eye could reach upon a dreary plain of rocky ice, relieved only by the frost-smoke issuing here and there from a few holes or lanes of water, and suddenly to turn to the small dark speck which denoted the ship, the abode, alas! how frail, of living men, imprisoned amidst this 'abomination of desolation.' What a multitude of reflections rushed into the mind! the might of nature—the physical feebleness of man—and yet again the triumph of spirit over matter—man trusting in his own unquenchable energy and the protection of an omnipresent Providence, braving nature in the very strongholds of her empire, and if not successful in the encounter, yet standing up unvanquished and undismayed. It was indeed a scene not readily to be forgotten."

The floe about the ship continued to crash and to open; the rents giving freedom to masses of ice confined underneath. Huge calves of ice, yellow and brown with age, darted up to the surface, looking like unsightly blotches on the pale features of the general scene. The ice composing the entire body to the verge of the horizon had formerly consisted of immense floes of different sizes, all

more or less irregular, but chiefly crowned by peaked and massy hummocks; of these not one now remained; the whole had been crushed, ground, and powdered to a rough splintery surface.

On the 17th of February alarm was given that the floe alongside was breaking up. A rent extended from the stern of the ship to the edge of the floe, and another from the bow to the east brink, forming a continuous line of separation directly through the centre. The ship complained and strained considerably; gaping rents opened in the snow walls about the ship; a crashing, grinding, and rushing noise was heard beneath as well as at the borders of the floe; the cracks now extended in all directions to the ship; and in the midst of all this confusion and peril the intense cold and the dimness of the early hour combined to render the situation of the crew most alarming. At 5 A.M. a commotion like an earthquake took place; additional cracks opened across the snow-houses, galleries, and court-yard. The ship creaked in her beams and timbers: and to the great dismay of all, daylight displayed an advancing rampart of ice, forming a semicircle to seaward, rolling in one vast body at a height of about thirty feet. All around

enormous ice-calves escaped from confinement, and tossed up into irregular positions, looked like so many engines threatening destruction. But just when the danger seemed greatest the tumult suddenly ceased. The ice was so splintered and jagged, that to put a boat upon it was out of the question. Nor could the ice be made even for an hour a depository of provisions, full as it was of clear cracks and small holes, which were opening every instant. Nor could any thing have been conveyed to the land, now distant seven or nine miles, and no one probably could have reached it even without encumbrance.

Where the holes were formed and bare water exposed, the young ice formed quickly on the exposed surface, on which the crystals might actually be seen darting and glancing till they formed a continuous sheet.

The broken arches of the snow galleries, the rent walls and cracks in the floe, and the vast mounds around, resembled the scene after an earthquake; and when the ice actually separated some of the galleries floating in the water looked like tunnels. "To be at freedom to move," says Captain Back, "would, two months later, have

been the summit of our wishes; but now we were only mocked with a hope which could not be realized, while it involved immediate peril. The ice returned with accumulated force, making the ship crack fore and aft with a hideous creaking. My cabin door could with difficulty be forced open, and was split in the pressure. The people in alarm crowded on deck, and even the poor sick came tottering aft in an agony of terror. Providentially the ship lifted herself up fully eight inches under the pressure of a force that would have crushed a less strengthened vessel to atoms, and thus the opposing ice either passed in part beneath the bottom, or was wedged against the large masses at either end."

In this extremity the crew were collected and exhorted to implicit obedience to orders as well as kind and compassionate help to the sick. Fresh articles of warm clothing were dealt out, and as the moment of destruction was uncertain, the small bags in which those articles were contained were placed on deck with the provisions, so as to be ready at an instant. Bales of blankets, bear skins, pyroligneous ether for fuel, and whatever might be necessary, if the ship

was suddenly to break up, were got out, and spars were rigged over the quarters to hoist them out.

"Though I had seen vast bodies of ice from Spitzbergen to 150° west longitude, under various aspects, some beautiful and all more or less awe-imposing, I had never witnessed nor even imagined any thing so fearfully magnificent as the moving towers and ramparts that now frowned on every side." The innermost fragments of the floe every now and then closed upon the defenceless vessel with a force that made every plank complain. The night was very fine, but the vapour which arose from the many cracks quickly became converted into small spiculæ of snow, rendering the cold intolerably keen to those who faced the wind.

From the 5th to the 8th of February, the commotion went on enlarging many old cracks, and causing several new ones, and consequently grinding or overlapping whatever obstructed them. The pressure came suddenly and without warning on the ship, and strained her fore and aft. The whole scene as far as the eye could stretch was confusion. Broken points at every angle, hummocks, mounds, jagged and warped masses, splinters,

walls and ramparts, with here and there, at far intervals, the remains of some floe not yet entirely broken up. "Such was the picture which saluted us on every side, teaching the lesson of humility and resignation to the will of heaven." Much ice was forced underneath the bottom on the starboard side, and often bounded up with severe concussions, making the ship tremble at each successive shock. The ice at the surface still continued to shift and to try the ship severely. She was strengthened by lashing and shoring; but the cracking of the pitch and timber about the stern frame gave notice of fresh annoyance. Anxiety was sometimes relieved by a general stillness, but the same unwelcome sounds soon returned indicating great pressure. The small snow flying about caused a penetrating cold. The temperature was 33° below zero. The ice, though apparently close-jammed together, was often in motion, and came with such sudden shocks that none could sleep. But in the midst of all this peril the Sabbath was not neglected; the devotions of the crew were tinged with a solemnity becoming the precarious nature of their condition; and a sermon upon the appropriate text "It is the Lord; let

Him do what seemeth Him good," was listened to with the most profound and serious attention.

The time of the lowest neap tides brought no relief; the creaking and crashing of the ice were horrible; and closing in, it held the ship in a tighter grasp than before. The frost-smoke from the lanes of water, which every now and then opened, obscured the land, which they seemed to have approached. The quantity of clothing which the cutting cold rendered necessary, required so much time to put on, that few ventured to take it all off, when seeking to snatch a few hours rest.

It was curious to notice, that in the midst of all this turmoil and confusion, the same masses of ice continued around the ship; indeed, one huge mass was called Mount Pleasant,* from its being a general look-out for the crew. The identical pieces of the floe, with the marks of the ship's side, from the severe nip of the previous September, were still within a few paces. By degrees, however, the ship was relieved from pressure, righted herself, and floated free in her dock, that is, she was from two to three feet away from the walled sides of ice and snow which usually hemmed her in,

* See Frontispiece to Part I. page 18.

the clear interval below being frozen hard with young ice. But she was destined to endure far rougher usage than she had yet experienced. At 10 o'clock P.M. on the 1st of March, several sudden jerks were heard, and an hour after, a general rumbling. After a time, when all was still, and apparently ended, suddenly, the vast bodies in contact with, and immediately surrounding the ship, were in fearful agitation, rising up in grinding conflict, piece thrown over piece, until the ponderous walls tumbled over, the whole being accompanied by noises as of screeching, and howling, and whining, which were absolutely hideous. Such was the violence of the pressure, that the ship was lifted up abaft, and both hull and rigging trembled violently. Another pause ensued; "the stars shone brightly, a faint gleam of aurora was playing near the zenith, and so beautiful and hushed was every thing, that nature seemed as it were in a trance. But scarcely had the idea flitted across the mind, when the war burst out again with more fury than ever, and huge fragments and masses seemed to be rolling down upon us, with an impetuosity that threatened immediate destruction." Repose was impossible; many started

from their beds, preferring, though they could do nothing, rather to see, than merely hear the danger.

Thirty-six small sledges had been prepared, provisions got ready, and arrangements made for whatever might happen, when on the 5th of March the ship seemed to be making her last struggle. For a few minutes she was forced up by the ice fifteen feet forwards, and then thrust resistlessly astern. Hardly was this over, when the large pieces on the starboard side, moved slowly forward, and the still more ponderous ones to windward closed at right angles, thus subjecting her to the severest trial. All this time the bottom was continually thumped and hammered by the huge ice-calves struggling to get free, each blow shaking the whole frame so violently, as to be sensibly felt on deck. Not knowing what the effect might be, the hands were turned up, and the sick dressed to be ready for the worst. The thermometer stood at —25°; at midnight there was a pause; a lane opened, the submerged masses got free, and the ship righted. Still the ice continued to be in motion; masses of many tons weight were seen riding on the tops of mounds, which before had been considered very high. But the

most striking effect had been produced along the walled side of the shore ice, where for several miles actual hills fifty feet high had been thrown up.

Every day now produced some change in the ice. On the 7th of March, there commenced a series of strange and unaccountable convulsions, which to any less fortified ship must have proved fatal. The fresh breezes from the N. and the N.N.E., which had brought the ice down for more than 360 miles, had fallen calm; light westerly winds now prevailed; but some ominous rushing sounds were heard, which gradually drew nearer as the flood made its way either under the compact bodies that withstood the shock, or along the cracks and openings, gaining in these latter a furious velocity, to which every thing seemed to yield. It happened that there were several of these around the ship, and when they opened upon it like so many conduits, pouring their contents into a common centre, the concussion was absolutely appalling, rending the lining and bulkheads in every part, loosening some of the shores, so that the slightest effort would have thrown them down, and compressing others with such force, as

to make the turpentine ooze out of their extremities. One fir plank placed horizontally between the beams and the shores actually glittered with globules. At the same time, the pressure was going on from the larboard side, where the three heaviest parts of the ruin of the floe remained, cracked here and there, but yet adhering in firm and solid bodies. These of course were irresistible, and after much groaning, and splitting, and cracking, accompanied by sounds like the explosion of cannon, the ship rose fore and aft, and heeled over about ten degrees to starboard. Bolts and other iron fastenings of the ship were loosened by the strain. On the 8th of March the ice closed again, and wedged the vessel tightly in; not a hole of water was visible from the mast-head, and for the first time for many nights, the crew enjoyed a tolerably peaceable night. Next day, however, the hubbub returned, and seemed to have reached its climax. A hollow grinding, as from the onward motion of some vast body, came louder and louder on the ear, the speed and the sound increasing as it approached, finally it burst with dreadful fury on the ship, causing such fearful cracks, and ominous tremblings, that all waited the result

in painful suspense. A little more, and she must go ! what of human construction could withstand the violence of such an onset ! still she continued to rise as the pressure increased. In an instant it ceased, and all was as still as death.

Some idea of the power exerted by the ice on the ship may be gathered from what took place on the night of the 11th: noises, in which the sharp sounds of splitting, and the harsher ones of grinding were most distinct, were heard for a time, and then suddenly ceased. In an instant the ship was felt to rise under the feet, and the roaring and rushing recommenced. She was held tight as in a vice. At one moment the forepart of the ship was literally buried as high as the flukes of the anchors, in a dock of upright walls of ice, so that in that part she might have been thought immoveable. Still such was the force applied to her abaft, that after much cracking and perceptible yielding of the beams, which seemed to move upwards, she actually rose by sheer pressure above the dock forward, and then with sudden jerks did the same abaft. During these convulsions, many of the people were violently thrown down, as in an earthquake. It was a moment of in-

tense suspense; and to avoid confusion, all hands were called, and the officers with their respective crews stationed at their boats, ready for lowering and securing them on the larger parts of the floe. This was done with the utmost coolness and promptitude, and thus prepared, they waited the result; but Heaven again protected them, and at 11 o'clock at night all was in profound repose.

The ship being nipped by the resistless force of about three hundred miles of drift ice, it was obvious that if any thing did happen, it would be as sudden as in all probability it would be serious. The crew were therefore now always kept prepared for a wreck. The ice, with the ship, was drifting nearer to land, when the next attack commenced. A heavy rush came on without the least warning, bearing the ship over on her starboard quarter. Suddenly a loud crack was heard below the mainmast, as if the keel were broken or carried away, and at the same time, the outer stern post from the ten-foot mark, was split down to an unknown extent.* The ship was thrown up by the stern to the seven-and-a-half-foot mark, and the leakage increased. Suddenly a rush was

* See cut at page 79.

heard, with a heavy roar, upturning in its progress, and rolling onward with it, an immense wall of ice. This advanced so fast, that though all hands were immediately called, they had barely time, with the greatest exertion, to extricate three of the boats, one of them in fact being hoisted up when only a few feet from the crest of the solid wave, which held a steady course directly for the quarter, almost overtopping it, and continued to elevate itself until about twenty-five feet high. A piece had just reached the rudder, which for safety had been slung athwart the stern; and at the moment when, to all appearance, both that, and a portion at least of the frame-work were to be staved in, and buried beneath the ruins, the motion ceased: at the same time, the crest of the nearest part of the wave toppled over, leaving a deep wall extending from thence beyond the quarter. The effect of all this was to open a leak, through which the water came running like a rill for about half an hour, when it stopped, the opening being probably closed by a pressure in an opposite direction. The other leaks could be kept under by the incessant use of one pump.

The intervals of repose were now very short,

for about one o'clock A.M. on the 16th of March, another rush drove irresistibly on the larboard quarter and stern, and forcing the ship a-head raised her up on the ice. A confused noise followed. "One poor and cherished court-yard, its wall and arched doors, gallery and well trodden paths, were rent, and in some parts ploughed up like dust. The ship was careened fully four streaks, and sprung a leak as before. Scarcely were ten minutes left us for the expression of our astonishment that any thing of human build could outlive such assaults, when another equally violent rush succeeded, and in its way towards the starboard quarter, threw up a rolling wave thirty feet high, covered by a blue square mass of ice of many tons, resembling the entire side of a house, which, after hanging for some time in doubtful poise on the ridge, at length fell with a crash into the hollow, in which, as in a cavern, the after part of the ship seemed imbedded. It was indeed an awful crisis, rendered more frightful from the mistiness of the night and the dimness of the moon. The poor ship cracked and trembled violently, and no one could say that the next minute would not be her last, and indeed

his own too, for with her our means for safety would probably perish."

On examining the ship considerable doubt existed whether she would prove sea-worthy, when the ice should slacken off and let her down to her bearings. Stores and provisions were ready to be thrown on deck upon any sudden emergency; and in the event of the loss of the ship, it was agreed that a light boat with provisions should be landed, to serve as a last resource to endeavour to communicate with the Hudson's Bay Company.

The changes in the ice from the advancing season now became more marked. Several well known hummocks, which had been in company with the ship for months, and had weathered out every gale, had in the comparative stillness of the night, disappeared altogether, taking with them large portions of the surrounding ice. The men were now occupied with pickaxes, ice-chisels, and shovels, in doing their part to get rid of the towering icy wave that propped up the stern. By the end of March ravens paid daily visits and sometimes perched on the tops of the most elevated hummocks, apparently watch-

ing the movements of those on board. A couple of speckled dovekies appeared playing about. A wish was expressed to shoot them, to which the captain was unwilling to accede, he being amused and gratified with their lively motions.

On the 1st of April was beheld the novel sight of water dripping and running along the decks. It was gratifying to observe that the clanging of the pump was less frequently heard, and still more enlivening to see the people cleaning the wet deck and removing the accumulated rubbish of a winter's gathering. The next day the largest unbroken remnant of the floe, which lay between the ship and the shore on the starboard side, and as yet had borne every encounter, split in two, and the parts opened out about eighteen inches. One part suddenly glided mysteriously away among the still rugged but loose fragments near. When the favourite look-out, Mount Pleasant, the faithful companion of the ship's wanderings, so long unshaken amidst the crash and ruin which had surrounded it; when this departed and became lost among other peaks and hummocks, an utter dissolution of all the parts of this icy system was looked for. The

ice was in fact gradually drifting through Hudson's Straits into the Atlantic, and making way for the liberation of the ship.

On the 10th of April a breeze arose and the ice being extremely close packed, began at 8 o'clock A.M. to make a grinding noise. This soon became louder as larger masses were thrown up, and looking towards the tidal edge of the shore ice, an immense piece, many tons in weight, was seen to be forced up vertically to a height of between twenty and thirty feet. Immediately after this there was a rush of seaward ice on the opposite side, and many of the piled up mounds were tumbling with a rattle on the starboard floe piece, when, to the astonishment of all, this was seen slowly to assume a convex form, and after gradually attaining a moderate elevation, splintered into fragments about one-third of the original piece, and these breaking off sailed heavily away to the eastward. A similar inroad was made on other parts of the floe. While this turmoil was going on two of the men, carelessly loitering about, soon found themselves separated from the ship, and it required some activity in scrambling over the moving mounds before they succeeded in reach-

ing it again. In the evening a noise was heard among the ice about a mile west of the ship, and soon the breeze urged the whole western body with irresistible force against the ship, the effect of which was that the remaining floe pieces were suddenly assailed by a powerful rush of the seaward ice, which began to grind and plough up the edges on every side. Frequently, during the process, there were brief intervals of cessation, followed by a quick return of the same action in a direction perhaps exactly opposite. Again there would be a general pause, not unlike the silence which succeeds a heavy crash of thunder; but suddenly, when hope was beginning to whisper that all was over, on it came again with a burst of deafening roar, destroying every thing in its furious course. "Wherever our eyes were turned, they were met by rising waves of ice rolling their burdens towards the ship. One in particular, not more than thirty paces away, had reared itself at least thirty feet on our inner floe piece, which, strong as it was, gave way under the accumulated weight; and a mass of several tons being thus upturned and added to the original bulk, the whole bore down slowly upon our quarter. The

ship herself was high out of the water on the ice, but this overtopped her like a tower. The ship was also getting nearer and nearer the land ice, and being unable to right herself began to complain. Every moment the scene became more dark and threatening." Again preparations were made for a wreck ; but now the case was different. Hitherto any one of the large pieces of ice about the ship would have held the boats, provisions, &c., but now they were surrounded by crushed and broken ice, large indeed, but too sharp and jagged to trust a boat on ; nor could any one have maintained a footing thereon, as every part was in motion. Hence it was quite impossible to reach the land. "Knowing this and feeling acutely for the many beings entrusted to my charge, it may be conceived with what intense anxiety I listened to the crashing and grinding around. The strength of the ship, tried and shaken as it had already been, could hardly be expected to withstand the overwhelming power opposed to it ; and what the result of that night might have been it is impossible to say and painful to contemplate, had not an overruling Providence mercifully averted the crisis by suddenly,

and at the moment of greatest peril, arresting the tumult. In less time than it could be spoken there was the stillness of death, and we were saved. The watch was called, the crew dismissed; and I trust that no one that night laid his head on his pillow without offering up a devout thanksgiving for the mercy which had been vouchsafed him."

Although the situation of a ship beset by ice may appear sufficiently frightful, yet in reality, it is exposed to less danger than when comparatively at liberty. In the former case, so long as the ice remains firm, she is exempted from serious pressure and is tolerably safe, whereas along the land every rock, bank, or projecting point catches the moving mass, and subjects the unhappy vessel to almost certain ruin.

With such a hard and anxious life as the crew of the Terror were compelled to endure, it cannot be wondered at that some sickness should occur. The men suffered most from an obstinate stiffness of the muscles of the leg. About this time, too, the gun-room steward died; his happy disposition and steady conduct had made him a favourite with the officers. This was the third poor shipmate that had been committed to the

THE SNOW-BUNTING.

deep. "Soon after the mournful ceremony was concluded, a little snow-bunting was observed to hover for a few seconds, over the aperture through which the body had been lowered, and then to fly away."*

* Captain Lyon, in the narrative of his voyage to Wager River, in 1824, states that on one occasion, while walking on shore, he crossed an Esquimaux burial-place. A pile of stones was heaped up over the body of a child. "A snow-bunting had found its way

At the end of April the weather was bright and beautiful; the heralds of spring had flown past the ship towards the north, and the gladness of advancing summer was felt by all; although as yet there was nothing around but one wide range of closely packed ice, grouped into thousands of peaked and irregular heaps, mounds, and barriers, which defied the activity of the most alert. The ship continued to drift during many days, with little inconvenience to the crew beyond that arising from the awkwardness of their situation, and the irksome monotony of the scene. On the 13th of May rain fell, and the thermometer stood at 34°. The ice surrounding the ship was hourly becoming more honey-

through the loose stones which composed this little tomb, and its now forsaken, neatly-built nest was found placed on the neck of the child. As the snow-bunting has all the domestic virtues of our English redbreast, it has always been considered by us as the robin of these dreary wilds; and its lively chirp, and fearless confidence, have rendered it respected by the most hungry sportsman. I could not on this occasion view its little nest, placed on the breast of infancy, without wishing that I possessed the power of poetically expressing the feelings it excited." The above representation of this little bird may interest the reader, although the scenery by which he is there surrounded does not belong to the regions which are now occupying our attention.

combed on the surface, which, being stripped of the frozen snow, displayed a variety of tints by which the age of its several parts could easily be detected. Among these it was interesting to notice the dim and sombre hue of irregular mounds, ridges, or peaks of age-stricken ice, peering out conspicuously amidst the more recent and brighter formations, like feudal castles frowning over a level waste.

On Sunday the 10th of June, soon after divine service, the weather became so fine, that little rills of water were pouring down from the more elevated pieces of ice into the hollows, and thence into the sea. A winding lane of water suddenly opened without any noise: but still the ship was ice-bound, and it seemed as if she had been placed in a bed of some plastic composition, which time had made solid as a limestone rock, such was the solid and durable nature of the ice around, for in it the ship had been frozen fast in October 1836, at the entrance of Frozen Strait, and now by the middle of June 1837 she had been carried into Hudson's Strait, on some of the very same ice that originally beset her, without having been able either to advance or retreat. The weather

continued fine, and the hours of tedious uniformity rolled heavily away amidst a dead calm. There was one novelty, however: on the 12th of June the temperature continued above the freezing point throughout the night, the lowest being 33°, or one degree above freezing; at noon on the 14th of June it stood at 54°.

Attempts would have been made to cut out the ship, but the great thickness of the ice prevented, for in some places it was thirty-three feet, and in others forty and fifty feet. Something, however, was done in cutting away the icy mounds about the ship, and while the men were engaged in this work on the 23rd of June, the floe piece they were on broke off, in consequence, it is supposed, of the upshooting of several immense calves. The rocking of the piece separated, placed the men in danger, from which they were promptly relieved by the boat, though not soon enough to save all the pickaxes, shovels, handspikes, &c. An attempt was made to get rid of a mound, by firing a couple of six-pounder shot at it, but instead of splintering and throwing it down, the shot merely cracked it, and buried themselves deep in the substance without doing further injury.

On the 1st of July, it was found possible to do something towards cutting out the ship. Two ice saws were joined, so as to make a length of thirty feet, and with this the work proceeded for several days; when on the 8th loud cracks were heard, as if something were yielding underneath, and on the 11th, as the saw was approaching the stern post, the various noises and crackings beneath indicated something unusual. When Captain Back visited the workmen, they were busy extricating calves and cutting a trench, and he had scarcely returned on deck, when a loud rumbling notified that the ship had broken her icy bonds. and was sliding gently down into her own element, "I ran instantly on deck, and joined in the cheers of the officers and men, who, dispersed on different pieces of ice, took this significant mode of expressing their feelings. It was a sight not to be forgotten; standing on the tafrail I saw the dark bubbling water below, and enormous masses of ice gently vibrating and springing to the surface; the first lieutenant was just climbing over the stern, while other groups were standing apart separated by this new gulf, and the spars, together with working implements, were

BREAKING UP OF THE FLOE.

resting half in the water, half on the ice, whilst the saw, the instrument whereby this sudden effect had been produced, was bent double, and in that position forcibly detained by the body it had severed. The ponderous bodies that had hemmed us round for nine months and more, the objects of our terror, and yet, perhaps, the appointed means of safety, were now seen float-

ing away, dark and discoloured, among the fresh and unspotted ice."

But the ship was not yet free: the keel and lower parts of the hull were still firmly imbedded in solid ice on both sides, though chiefly on the starboard, where a heavy fragment of the old floe still adhered. All sail was set, and with this unaccustomed appendage the ship drifted gently with the wind. Great caution was required in endeavouring to get rid of the icy coating, as it was known that the ship was much damaged about the keel. Two warps fixed to ice anchors and leading to either extremity of the ship, were so attached, as to disunite the entire mass; but while in the act of heaving a powerful strain on the warps, the icy covering suddenly split. The detached portion, on which were two men, was splintered into three pieces, two of which had a man on each, both of whom standing steadily on the whirling and heaving ice, gave a hearty cheer, but their cheering was turned to astonishment, as they watched the ship slowly rising, and heeling over to port. "We on board had been surprised that no counter action had occurred, and were beginning to wonder the vessel did not

recover her equilibrium, but were now startled by the conviction that she was gradually going over, and the great inclination rendering it impossible to stand on deck, every one clung as he best could. Then it was we beheld the strange and appalling spectacle, of what may be fitly termed a submerged iceberg, fixed low down, with one end to the ship's side, while the other, with the purchase of a long lever, advantageously placed at a right angle with the keel, was slowly rising towards the surface. Meanwhile, those who happened to be below, finding everything falling, rushed or clambered on deck, where they saw the ship on her beam ends, with the lee-boats touching the water, and felt that a few moments only trembled between them and eternity. Yet in that awful crisis there was no confusion; the sails were clewed up and lowered; fresh men were stationed in the boats, which again were rather unhooked than lowered; the barge was hoisted out; and with a promptitude and presence of mind which I shall ever remember with admiration, the whole five were provisioned and filled with arms, ammunition and clothing, and veered astern clear of danger. The pumps were

SITUATION OF THE TERROR IN HUDSON'S STRAIT.

never quitted, and though expecting that the ship might capsize, yet the question of 'Does the leak gain on us?' was asked, and when answered in the negative, there was still a manifestation of hope. Our fate, however, yet hung in suspense, for not in the smallest degree did the ship right; happily for us there was a dead calm, which permitted us to examine the berg."

Where it could be got at, the berg was found to be four fathoms thick, and along this it was determined to cut, if providentially time were spared for the operation. The situation was very awkward for slinging and placing the stages, and sheers for sawing. At 11 A.M. the work was begun, and it went on cheerily; the men were told that much depended on their exertions, and were encouraged to finish their task on the same day. Assisted by the officers, they sang and worked with the characteristic indifference to peril, which has been so often admired in British seamen. By midnight twenty-five feet only remained to connect the two sections which had been cut. The men did not relax until nature asserted her prerogative; many became so fagged and drowsy, that they actually worked mechanically with their eyes

shut. They were therefore sent to lie down for two hours. Captain Back states, that while he was contemplating their jaded forms stretched out in death-like slumber, and was remarking the languid action of those whose turn it was to take the pumps, there was suddenly a sensible yielding beneath the feet, with the grating sound of breaking ice, and before a word could be spoken, the liberated ship righted entirely, while broken spars, the bent saw, and the massy berg, were all in commotion together. "Quick as they could spring, the crew jumped on deck, and I know not how many cheers commemorated the joyful occasion. It was a scene not to be forgotten by the spectators. It wanted but one day to complete four months since the ship had been thrown upon the ice. In that period what extrordinary phenomena we had witnessed! what manifold mercies had shielded us when all seemed desperate—and now we were free; the good ship was once more in her own element, and subject to the will of man! I almost doubted the reality of what I saw."

"The crew were again alive for duty, and having unloaded and hoisted up the boats, the termination, as we hoped, of our weary anxieties

was celebrated by the distribution of a little grog to the crew, and after three cheers, which they requested permission to give to myself and the officers, the fine fellows were sent to their hammocks. * * What might have happened had the people remained on the ice it is difficult to conjecture, but as it rose and fell against the ship's side, which again on leaning over pressed upon it, there is reason to apprehend that few would have survived that fatal crush. Wonderful, therefore, was the whole, and well might we repeat with the Psalmist, 'They that go down to the sea in ships, that do business in great waters; these see the works of the Lord, and his wonders in the deep.' (Psalm. cvii. 23, 24.)

Captain Back still hoped that he should not be compelled to relinquish the object of his mission; but the shock occasioned by the first piece of ice that struck against the ship, proved clearly how much she was shaken and weakened; the leaks told of her crazy broken condition; the health of the crew had also greatly suffered, and the medicine chest was nearly exhausted, so that no choice remained; and accordingly assembling the crew on the quarter-deck, the captain told

them they were now going home. "It may be well pardoned them that their countenances brightened at the intelligence, and their feelings were manifested by three hearty cheers."

The ship sailed slowly among the loose ice, but it was necessary to steer with caution to avoid, as much as possible, the concussion of the floating masses, for the shock even of a comparatively small piece made the ship's frame tremble. The bumping of the ice still further weakened the after part of the ship, so that, to use the carpenter's phrase, "the bolts wept," or, in other words, were already sufficiently loosened to allow the water to ooze between them and the wood. Two pumps were always required to keep the ship free.

It was not a little curious to observe the strange movements of those huge masses, the heavy remnants of floes; now pressing directly towards the ship, now turning aside and across the previous course, as it were reluctantly retreating;—then again, as if urged by fresh vigour, turning slowly round and gradually reappearing; until suddenly, under some powerful but unseen influence, their whirling ceased and they started off

ICE-BERG.

with accelerated speed in a straight line immediately against the wind, ploughing up or tossing aside every impediment that crossed their way. On the 2nd of August one of these large floe pieces drove against the ship with a crash that occasioned much alarm. At length, however, they got free of the ice, for on the 5th only three or four bergs, and some straggling streams of ice were to be seen. A peculiar gloom of a leaden grey tinge, the effect of a dark sky on open

water, seemed unusually dull and heavy to eyes inured to a twelve-month's glare of Polar ice. "But it had not power to damp the joy that beamed on every countenance at the long wished for liberation that now quickly broke upon us. Our invalids became animated; and even the few who were seriously affected, and had long worn the sallow livery of disease, raised their feeble frames from their beds, and, with a smile, once more thought of home."

But this joy was soon turned into anxiety by the state of the ship: the water rushing in from a variety of places, warned them how little they had to depend upon for safety, except the providential care which had hitherto been their stay and comfort. The altered appearance of the crew plainly shewed the change that was taking place from their incessant labour. It seemed almost impossible to keep the ship from filling; the water fell like a cascade into the bread room and other parts. What added to the horror of the situation was a gale, which gradually increased in fury, strengthened by squalls, which raised a long breaking sea, in which the ship plunged heavily. It was evident she was hourly getting

more water-logged: the straining and creaking of her whole frame, the working of the bulk-heads, which actually raised the officers' bed places, the rickety twisting occasioned by the fore and aft motion, and the prolonged dull roll to windward, to say nothing of the cascade-like rushing of the water within—all these were certain indications of a consummation, which no exertions of the officers and men would probably be able to deter. Shortly after midnight, the first lieutenant reported that the crew were no longer equal to the task of keeping the leaks under, and that consequently the ship was sinking; but the fine fellows, though dreadfully exhausted, again rallied, and cheered and aided by the officers worked with renewed vigour, until once more they got the water under, and from that time kept it so.

Meanwhile the ship, struck and lashed by a heavy sea, crazy and water-logged, struggled on during her passage of about five weeks across the Atlantic. To prevent the ship from actually falling to pieces, they adopted the very same device which is mentioned in the memorable voyage of Saint Paul; "they used helps, under-girding the ship," (Acts xxvii. 17;) that is, they passed a

number of chain cables round her, making them tight by means of the windlass, and screwing them up every morning. At length the gale abated, and on the 3rd of September, crowding every stitch of canvas, a sail was descried in the distance, the first that had yet been seen. "Under ordinary circumstances, a signal would have been made to attract her attention, but time was too precious with us now that we were pressing forward for our lives; and about two o'clock in the afternoon, within half an hour of our calculation, the joyful sound of land was announced from the look-out man at the mast-head. It was late when we closed it, but being anxious to obtain a pilot, rockets, blue-lights, and guns were fired for the purpose, but no one came; wherefore, trusting to the soundings, we glided silently past the lights of the fisherman's cottage, and near midnight anchored safely in Lough Swilly.

"Fifteen long months had elapsed since that pleasing sound of a falling anchor had greeted us, and when we reflected on what had passed in that interval, and above all, on the difference which a few hours had made in our prospects, we could not but feel devoutly grateful to Providence for the

mercy which had been vouchsafed us. It was impossible immediately to compose our feelings into tranquillity, and the remainder of the night was passed in a state of feverish excitement. When morning came, with what indescribable delight did we inhale the fragrance and contemplate the beauty of the land. Imagination could scarcely picture a scene so enchanting as to our weary and frost-dazzled sight, appeared that soft and lovely landscape, with its fresh green tints and beautiful variety of hill and dale. It was an enjoyment to be felt but once in a life, and how much was that enjoyment enhanced when the wind suddenly changed and blew a gale off shore, which, but a few hours earlier, must have driven us back to sea, and in all probability terminated our labours in a different way."

As the Terror was gradually sinking, she was run ashore on a small sandy beach. It was found at low water that upwards of twenty feet of the keel, together with ten feet of the stern post were driven over more than three and a half feet on one side, leaving a frightful opening astern for the free entrance of the water. When the generally shattered state of the ship was seen, every one on

PART II.

WINTER IN A SECURE HARBOUR. — THE ADVENTURES OF H.M.S. HECLA AND GRIPER AT MELVILLE ISLAND DURING THE WINTER OF 1819-20.

The circumstances under which Captain Sir George Back wintered in Hudson's Strait, were of the most unusual kind. Indeed, there is no other instance on record, of a ship being arrested in its course, by the resistless arm of a premature winter in the Arctic Regions, and wintering out in the open sea, exposed to the fearful assaults of floating mountains and fields of ice. The manner in which Captain Back met the difficulties of his situation, and succeeded at length in bringing his ship safely home, has had the effect of exalting his name among the commanders in the British navy, and adding largely to his previously well-earned fame.

Happily for the progress of geographical and

scientific discovery, a winter in the Arctic Regions, is not always so fearful a thing as it would appear to be from the preceding narrative. Other commanders have wintered in those regions under more favourable circumstances; and the comforts they enjoyed, and the method of passing their time as related in the following narratives, will disarm even an Arctic winter of many of its terrors.

In the year 1819, two ships, the Hecla and the Griper, were fitted out for a voyage of discovery in search of the North-West Passage, and the command of the expedition was intrusted to Sir W. E. Parry, then Lieutenant Parry. On the 11th of May, the ships left the river, and on the 28th of June had entered Davis's Strait. On the 1st of August the ships entered Sir James Lancaster's Sound, and on the 3rd, an easterly breeze springing up, the vessels were carried rapidly forward to the westward, into regions which had hitherto been unexplored. The sea was open before them, free from ice and land; and "it is more easy," says Parry, "to imagine, than to describe, the almost breathless anxiety which was now visible in every countenance, while, as the breeze increased to a fresh gale, we ran quickly up the

sound. The mast-heads were crowded by the officers and men during the whole afternoon; and an unconcerned observer, if any could have been unconcerned on such an occasion, would have been amused by the eagerness with which the various reports from the crow's-nest were received, all, however, hitherto favourable to our most sanguine hopes." They passed various headlands, with wide openings towards the north and south, which they named Croker Bay, Navy Board Inlet, &c., but had no time to explore them, for the wind seemed to be happily carrying them towards the completion of the grand object of the expedition. At midnight, they were in longitude 83° 12′, nearly one hundred and fifty miles from the mouth of the sound, which still retained a breadth of fifty miles. They continued to advance to 86° 30′, and the swell which rolled in from the north and west, together with the ocean-like hue of the waters, inspired the hope that they had now entered upon the wide expanse of the Arctic Ocean, and that nothing would prevent them from reaching the western boundary of America. But as they proceeded, they had the mortification of seeing a line of continuous ice, which a little farther on

was found to be joined to a compact and impenetrable body of floes, which extended across the channel. They were therefore compelled to stand out, to avoid being embayed in ice, along the edges of which a violent surf was beating. Towards the south, however, was an open sea and a dark water sky, and Parry, hoping to find a free passage in a lower latitude, steered in this direction, and arrived at the mouth of a great inlet, ten leagues broad, with no visible termination. The two capes at its entrance were named Clarence and Seppings. They sailed a hundred and twenty miles up this inlet, (which they named after the Prince Regent,) until they were again stopped by ice. Parry therefore determined to return to the point from which he had deviated from a westerly course, and watch for an opening in the ice, which would allow the ships to proceed westward. On reaching the station, the ice seemed to be as compact as before, with a bright blink. On the 18th, they succeeded in making a little way, by getting close to the northern shore, when showers of rain and snow fell, accompanied with a strong wind, so that on the 21st, all the ice had disappeared; and it was scarcely possible to be-

lieve this to be the same sea, which a few days before was covered with floes as far as the eye could reach. Parry crowded all sail to the westward, naming bays, islands, and inlets, as he proceeded. The navigation was difficult on account of the irregularity of the compass, from its being so near the magnetic pole; and thick fogs prevented them from knowing the direction in which they sailed. They endeavoured to preserve the same line, trusting to the land and the ice; and after overcoming numerous obstacles, they came to a large island, which they named Melville Island. They continued to move slowly forward till, on the 4th of September, Parry says, "We had the satisfaction of crossing the meridian of 110° west from Greenwich, in the latitude of 74° 44′ 20″; by which his Majesty's ships, under my orders, became entitled to the sum of five thousand pounds, being the reward offered by the king's order in council, grounded on a late Act of Parliament, to such of his Majesty's subjects as might succeed in penetrating thus far to the westward, within the Arctic Circle." In order to commemorate their success the men named the bluff headland where the observation was made Bounty Cape.

The ships continued to push on until they were again stopped by ice. They remained nearly a fortnight before it, in hopes of being able to proceed; but by about the 20th, the young ice began to form rapidly on the surface of the waters, and was prevented only by winds and swells from forming a continuous sheet, so that in the event of a single hour's calm, the ships would have been frozen up in the midst of the sea, and exposed to all those dangers and inconveniences which the Terror afterwards suffered. It was necessary, therefore, to return to Melville Island, and to choose one of the two apparently good harbours, which had been passed. After considerable difficulty, this place was reached on the 24th, when it was decided to adopt as a wintering place the western harbour, as being the only one which afforded full security; but in order to get at it, it was necessary to cut a canal upwards of two miles in length, through a large floe which filled it. "This operation was performed by first marking out two parallel lines, distant from each other a little more than the breadth of the larger ship. Along each of these lines a cut was then made with an ice-saw, and others again at right angles to them at intervals of

from ten to twenty feet; thus dividing the ice into a number of rectangular pieces, which it was again necessary to subdivide diagonally, in order to give room for their being floated out of the canal. * * To facilitate the latter part of the process, the seamen, who are always fond of doing things in their own way, took advantage of a fresh northerly breeze, by setting some boats' sails upon the pieces of ice, a contrivance which saved both time and labour. This part of the operation, however, was by far the most troublesome, principally on account of the quantity of young ice, which formed in the canal, and especially about the entrance, where, before sun-set, it had become so thick that a passage could no longer be found for the detached pieces, without considerable trouble in breaking it." The ships were then moved up the whole length of the canal that had been cut. On the next day the cutting proceeded; but now the pieces as they were cut could not be floated out, as the lower part of the canal, through which the ships had passed, had been hard frozen during the night. The pieces, therefore, as they were cut were sunk under the floe. In this way the work proceeded, until, on the middle

of the fourth day (26th of September), the ships reached their winter quarters, an event which was hailed with three loud and hearty cheers from both ships' companies. The ships were in five fathoms water, a cable's length from the beach, on the north-western side of the harbour, which was named *Winter Harbour;* and the group of large islands which had been passed, were named the 'North Georgian Islands,' in honour of our gracious sovereign George the Third, whose whole reign had been so eminently distinguished by the extension and improvement of geographical and nautical knowledge, and for the prosecution of new and important discoveries in both."

They had good reason to be satisfied with the situation they had chosen in Winter Harbour, for on the night of the 4th of October, a strong gale blew from the southward, and in the morning the main ice was found to have pressed in very forcibly upon that which was newly formed near the entrance, while within the two points of the harbour, it remained perfectly solid and undisturbed. The difference between the two stations will be at once understood, if the reader supposes the Terror

to be outside the harbour, exposed to the fury of the gale, and the ever shifting ice; while the Hecla is within the harbour, where the ice remains undisturbed throughout the whole winter. It will be remembered that Captain Back, with bays and harbours within sight of him, had to lament the utter impossibility of getting into them.

The Hecla and the Griper were now comfortably settled down in the station, where, in all probability, they were destined to remain, for at least eight or nine months, during three of which they were not to see the face of the sun. "My attention," says Lieutenant Parry, "was immediately, and imperiously called to various important duties; many of them of a singular nature, such as had for the first time devolved on any officer in his Majesty's navy, and might indeed be considered of rare occurrence in the whole history of navigation. The security of the ships, and the preservation of the various stores, were objects of immediate concern. A regular system to be adopted for the maintenance of good order and cleanliness, as most conducive to the health of the crews during the long, dark, and dreary winter, equally demanded my attention."

Preparations were immediately made for housing over the ships. The masts were dismantled, except the lower ones and the Hecla's main-topmast; the lower yards were lashed fore and aft amidships, to support the planks of the housing; and the whole of this frame-work was afterwards roofed over with a cloth.* The warmth and dryness of the berths and bed-places were next attended to. It was found that the low temperature (for the thermometer had already fallen considerably below zero of Fahrenheit) caused the steam from the coppers, the breath of the people, and other vapour to condense into drops upon the beams and the sides, to such a degree as to keep them constantly wet. In order to carry off this vapour a large stone oven, cased with cast iron, in which the ship's bread was baked, was placed on the main hatchway, and the stove-pipe led fore and aft on one side of the lower deck, the smoke being thus carried up the fore hatchway. On the opposite side of the deck a contrivance was made for conveying heated air to the men's berths. This consisted of an iron box or air vessel with three pipes of two inches diameter,

* See Frontispiece to Part II. p. 80.

communicating from below with the external air, and uniting above in another metal box, to which was attached a copper stove-pipe proceeding to the middle part of the lower deck. When a fire was made under the air vessel the air became heated in its passage through the three pipes, from which it was conveyed through the stove-pipe to the men's berths. A moderate fire produced a current of air of the temperature of 87°, at the distance of seventeen feet from the fire-place. Regulations were then made for serving out the provisions. The allowance of bread was permanently reduced to two-thirds: a pound of Donkin's preserved meat, together with one pint of vegetable or concentrated soup, per man, was substituted for one pound of salt beef weekly; a proportion of beer and wine was served in lieu of spirits. The beer was prepared from essence of malt and hops, but the steam arising from the brewing was so annoying, during the cold weather, that it was discontinued. In order to preserve the men as much as possible against that dreaded disease, the scurvy, a medical inspection was ordered once a week, and anti-scorbutics were regularly administered. A small quantity of sour-krout and pickles, with as much

vinegar as could be used, was issued at regular intervals; the sailors were also called together every day, and made to swallow a quantity of lime-juice and sugar in the presence of an officer appointed to attend to this duty. "This latter precaution may appear to have been unnecessary to those who are not aware how much sailors resemble children in all those points, in which their own health and comfort are concerned." Whenever any game was procured it was served instead of, and not in addition to, the established allowance of other meat, "except in a few extraordinary cases, when such an indulgence was allowed; and in no one instance, either in quantity or quality, was the slightest preference given to the officers." The expenditure of fuel was regulated with strict economy, such a quantity of coal only being used as was barely sufficient for the preservation of health on board the ships. The small quantity of moss and turf which could be collected was too wet to be used as fuel.

Great attention was also paid to the clothing of the men. It was desirable to have the bedding aired on deck at least once a week; but this was found to be impossible, for whenever a blanket

was brought on deck, it soon acquired the temperature of the atmosphere. When this happened to be rather low, and the blanket was taken into the warmer parts of the ship, the vapour settled and condensed upon it, rendering it almost instantly so wet as to be unfit to sleep on.

"Under circumstances of leisure and inactivity, such as we were now placed in," says the Commander, "and with every prospect of its continuance for a very large portion of the year, I was desirous of finding some amusement for the men, during this long and tedious interval. I proposed, therefore, to the officers to get up a play occasionally on board the Hecla, as the readiest means of preserving among our crews that cheerfulness and good humour which had hitherto subsisted. In this proposal I was readily seconded by the officers of both ships; and Lieutenant Beechey having been duly elected as stage-manager, our first performance was fixed for the 5th of November, to the great delight of the ship's companies. In these amusements I gladly undertook a part myself, considering that an example of cheerfulness, by giving a direct countenance to every thing that could contribute to it, was not the

least essential part of my duty under the peculiar circumstances in which we were placed." It is scarcely necessary to say, that these entertainments were completely successful; the men were often convulsed with laughter, excited probably in no small degree, by seeing their officers in so singular a position. The entertainments were repeated every fortnight, and were looked forward to with the greatest delight; and "even the occupation of fitting up the theatre and taking it to pieces again, which employed a number of men for a day or two, before and after each performance, was a matter of no little importance, when the immediate duties of the ship appeared by no means sufficient for that purpose; for I dreaded the want of employment as one of the worst evils that was likely to befal us." It was feared at one time that the severity of the weather would have put a stop to this amusement; but such was the zeal of the officers, and the interest of the men, that, although on the stage the thermometer was sometimes below zero, the play was performed as usual; and when the scanty stock on hand was exhausted, original pieces were composed.

"In order still further to promote good-humour

among ourselves, as well as to furnish amusing occupation, during the hours of constant darkness, we set on foot a weekly newspaper, which was to be called the *North Georgia Gazette and Winter Chronicle*, and of which Captain Sabine undertook to be the Editor, under the promise that it was to be supported by original contributions from the officers of the two ships: and though some objection may perhaps be raised against a paper of this kind being generally resorted to in ships of war, I was too well acquainted with the discretion, as well as the excellent dispositions of my officers, to apprehend any unpleasant consequences from a measure of this kind; instead of which I can safely say that the weekly contributions had the happy effect of employing the leisure hours of those who furnished them, and of diverting the mind from the gloomy prospect which would sometimes obtrude itself on the stoutest heart."

But although amusements were attended to, the interests of science were not forgotten. An observatory was erected under the direction of Captain Sabine, in a convenient spot about seven hundred yards to the westward of the ships. A house was also built near the beach for the

reception of the clocks and other instruments. The walls were of double planking, with moss placed between the two, so that a high temperature could be kept up in it by a single stove even in the severest weather.

THE REIN-DEER.

Soon after their arrival in Winter Harbour rein-deer and grouse were seen, a few of which were taken previous to the migration of these

and other animals from the island, which took place before the close of the month of October, leaving only the wolves and foxes to keep the ships company during the winter. On the 1st of October, Captain Sabine's servant was pursued by a large white bear, the only one seen during the stay of the party. On approaching the ships, he was wounded by several balls, but succeeded in making his escape. On the 10th some deer being seen near the ships a party was sent out after them, and did not return till late. Pearson, a marine belonging to the Griper, who was the last that returned on board, had his hands severely frost-bitten, having imprudently gone away without mittens, and with a musket in his hand. "A party of our people most providentially found him, although the night was very dark, just as he had fallen down a steep bank of snow, and was beginning to feel that degree of torpor and drowsiness, which, if indulged, inevitably proves fatal. When he was brought on board his fingers were quite stiff, and bent into the shape of that part of the musket, which he had been carrying: and the frost had so far destroyed the animation in his fingers on one hand, that it was

necessary to amputate three of them a short time after, notwithstanding all the care and attention paid to him by the medical gentlemen The effect which exposure to severe frost has in benumbing the mental as well as the corporeal faculties, was very striking in this man as well as in two of the young gentlemen who returned after dark, and of whom we were anxious to make inquiries respecting Pearson. When I sent for them into my cabin, they looked wild, spoke thick and indistinctly, and it was impossible to draw from them a rational answer to any of our questions. After being on board for a short time, the mental faculties appeared gradually to return with the returning circulation, and it was not till then that a looker-on could easily persuade himself that they had not been drinking too freely. To those who have been much accustomed to cold countries, this will be no new remark; but I cannot help thinking (and it is with this view that I speak of it) that many a man may have been punished for intoxication who was only suffering from the benumbing effects of frost; for I have more than once seen our people in a state so exactly resembling that of the most stupid

intoxication, that I should certainly have charged them with that offence had I not been quite sure that no possible means were afforded them on Melville Island, to procure any thing stronger than snow-water. In order to guard, in some measure, against the danger of persons losing their way, which was more and more to be apprehended as the days became shorter, and the ground more covered with snow, which gives such a dreary sameness to the country, we erected on all the hills within two or three miles of the harbour, finger-posts pointing towards the ships."

During a hard gale accompanied by snow-drift, with a very low temperature, which occurred frequently during the winter, no person was permitted to leave the ships, for it is Parry's belief that no human being could have remained alive after an hour's exposure to it. In order, therefore, to secure a communication between the ships, a distance not exceeding half a cable's length, as well as from the ships to the house on shore, a line was kept extended as a guide from one to the other.

At the end of October the sun afforded sufficient light for writing and reading in Lieutenant Parry's cabin, the stern windows of which exactly faced

the south, from half-past nine till half-past two; for the rest of the twenty-four hours they lived of course by candle-light. The weather was considered to be mild when the thermometer stood at zero (that is, 32° *below* the freezing point of water); for, as Parry remarks, "our bodies appeared to adapt themselves so readily to the climate, that the scale of our feelings, if I may so express it, was soon reduced to a lower standard than ordinary; so that after living for some days in a temperature of —15° or —20°, it felt quite mild and comfortable when the thermometer rose to zero, and *vice versâ*."

The effects of the cold were displayed in a remarkable manner when metals in the open air were touched with the naked hand; "the feeling produced by it exactly resembling that occasioned by the opposite extreme of intense heat, and taking off the skin from the part affected. We found it necessary, therefore, to use great caution in handling our sextants and other instruments, particularly the eye-pieces of telescopes, which, if suffered to touch the face, occasioned an intense burning pain; but this was easily remedied by covering them over with soft

leather. Another effect, with regard to the use of instruments, began to appear about this time. Whenever any instrument, which had been some time exposed to the atmosphere, so as to be cooled down to the same temperature, was suddenly brought below into the cabins, the vapour was instantly condensed all around it, so as to give the instrument the appearance of smoking, and the glasses were covered almost instantaneously with a thin coating of ice, the removal of which required great caution to prevent the risk of injuring them, until it had gradually thawed as they acquired the temperature of the cabin. When a candle was placed in a certain direction from the instrument, with respect to the observer, a number of very minute spiculæ of snow were also seen sparkling around the instrument, at the distance of two or three inches from it, occasioned, as we supposed, by the cold atmosphere produced by the low temperature of the instrument, almost instantaneously congealing into that form the vapour which floated in its immediate neighbourhood." So also whenever the doors at the top and bottom of the hatchway-ladders were opened, the vapour was immediately con-

densed by the sudden admission of the cold air into a visible form, exactly resembling a very thick smoke, which settled on the doors and bulkheads, and formed a thick coating of ice, which it was necessary frequently to scrape off; "but we never, to my knowledge," says Parry, "witnessed the conversion of the vapour into snow during its fall." Another remarkable effect of the cold was upon the lower rigging, which became extremely slack during the severity of the winter, and gradually tightened again as the spring returned; effects the very reverse of those which had been expected, and which Parry accounts for by the extreme dryness of the atmosphere in the middle of winter, and the increase of moisture afterwards.

On the 4th of November the sun disappeared for ninety-six days, not to be again seen above the horizon till the 8th of February. A few days after this event, a star of the first magnitude was seen at noon; and half an hour after, those of the second magnitude in Ursa Major were visible. During the three months' interval of nearly total darkness, as abundant employment was found for all as at any other part of this

long and severe winter. Indeed so well occupied had the men been that they complained of not having time to mend their clothes. Of the manner in which they passed their time, a minute account, of which the following is a brief abstract, is given by Lieutenant Parry.

The officers and quarter-masters were divided into four watches, which were regularly kept, as at sea, while the remainder of the ships' company were allowed to enjoy their night's rest undisturbed. The men rose at a quarter before six, and both decks were well rubbed with stones and warm sand before eight o'clock, at which time both officers and men went to breakfast. Three quarters of an hour being allowed after breakfast for the men to prepare themselves for muster, every person on board at a quarter-past nine, attended on the quarter-deck, and a strict inspection of the men took place as to their personal cleanliness, and the good condition, as well as sufficient warmth of their clothing. The reports of the officers having been made, the people were allowed to walk about, or more usually to run round the upper deck, while Lieutenant Parry went to examine the state of that below. Whenever any

dampness appeared, or any ice had formed during the night, it was removed, and the warm air-pipe directed towards the place. The bed-places were very troublesome; the partition next the ship's side being nearly always covered with dampness or ice, according to the temperature of the deck during the preceding night. The few men on the sick list were also visited, and the medical officer consulted as to the means of improving the warmth, ventilation, and general comfort of the inhabited parts of the ship. The commander then returned to the upper deck and personally inspected the men; after which they were sent out to walk on shore, when the weather would permit, till noon, when they returned on board to dinner. "When the day was too inclement for them to take this exercise, they were ordered to run round and round the deck, keeping step to the time of an organ, or, not unfrequently, to a song of their own singing. Among the men were a few who did not at first quite like this systematic mode of taking exercise; but when they found that no plea, except that of illness, was admitted as an excuse, they not only willingly and cheerfully complied, but made it the

occasion of much humour and frolic among themselves.

"The officers, who dined at two o'clock, were also in the habit of occupying one or two hours in the middle of the day in rambling on shore, even in our darkest period, except when a fresh wind and a heavy snow-drift confined them within the housing of the ships. It may well be imagined that at this period, there was but little to be met with in our walks on shore, which could either amuse or interest us. The necessity of not exceeding the limited distance of one or two miles, lest a snow-drift, which often rises very suddenly, should prevent our return, added considerably to the dull and tedious monotony which day after day presented itself. To the southward was the sea, in its dazzling whiteness, except that in some parts a few hummocks were seen thrown up somewhat above the general level. Nor did the land offer much greater variety, being almost entirely covered with snow, except here and there a brown patch of hard ground in some exposed situations, where the wind had not allowed the snow to remain. When viewed from the summit of the neighbouring hills on one of these calm and clear

days, which not unfrequently occurred during the winter, the scene was such as to induce contemplations which had perhaps more of melancholy than of any other feeling. Not an object was to be seen on which the eye could long rest with pleasure, unless when directed to the spot where the ships lay, and where our little colony was planted. The smoke which there issued from the several fires, affording a certain indication of the presence of man, gave a partial cheerfulness to this part of the prospect; and the sound of voices, which, during the cold weather, could be heard at a much greater distance than usual, served now and then to break the silence which reigned around us, a silence far different from that peaceable composure which characterizes the landscape of a cultivated country; it was the death-like stillness of the most dreary desolation, and the total absence of animated existence. Such, indeed, was the want of objects to afford relief to the eye or amusement to the mind, that a stone of more than usual size appearing above the snow in the direction in which we were going, immediately became a mark, on which our eyes were unconsciously fixed, and towards which we mechanically

advanced. Dreary as such a scene must necessarily be, it could not, however, be said to be wholly wanting in interest, especially when associated in the mind with the peculiarity of our situation, the object which had brought us hither, and the hopes which the least sanguine among us sometimes entertained of spending a part of our next winter in the more genial climate of the South Sea Islands. Perhaps, too, though none of us then ventured to confess it, our thoughts would sometimes involuntarily wander homewards, and institute a comparison between the rugged face of nature in this desolate region, and the livelier aspect of the happy land which we had left behind us."

But we must proceed with the account of the day's employments. In the afternoon the men were usually employed in drawing and knotting yarns, and in making points and gaskets.* This work was done entirely on the lower deck, the yarns becoming so hard and brittle when exposed on deck as to be too stiff for working and very

* *Points* are the short lines by which sails are reefed, or reduced in depth. *Gaskets* are the platted cords used to secure the sails to the yards when furled.

easily broken. At half-past five the decks were cleared up, and at six the same examination of the men and of their berths and bed-places took place as in the morning. The men then went to supper and the officers to tea. After this the men amused themselves as they pleased with games of various kinds, with singing and dancing, till nine o'clock, when they went to bed, and their lights were extinguished. In order to guard against fire, the quarter-masters visited the lower deck every half hour during the night; and to secure a ready supply of water in the event of so terrible an accident, a hole was cut twice a day in the ice close alongside each ship. The officers were chiefly employed in the evening in reading and writing, to which were occasionally added a game of chess, or a tune on the flute or violin till half-past ten, about which time they all retired to rest.

In this way the six days of the week were usually occupied. "On Sundays, divine service was invariably performed, and a sermon read on board both ships; the prayer appointed to be daily used at sea, being altered so as to adapt it to the service in which we were engaged, the success which had hitherto attended our efforts,

and the peculiar circumstances under which we were at present placed. The attention paid by the men to the observance of their religious duties, was such as to reflect upon them the highest credit, and tended in no small degree to the preservation of that regularity and good conduct for which, with very few exceptions, they were invariably distinguished."

During the gloomiest part of the winter, when the sun was constantly below the horizon, and the stars were visible at noon, it must not be supposed that day had so completely melted into night as not to be distinguished from it. On the contrary, the return of each successive day was marked about noon by a considerable twilight, which even on the shortest day allowed the party to walk out very comfortably for nearly two hours. In clear weather an hour or two before, and after noon, a beautiful arch of bright red light was seen over the southern horizon. At other times the reflexion of light from the snow, aided occasionally by a bright moon, was sufficient to prevent anything like the gloomy night which occurs in more temperate climates. The magnificence of a Polar sky was also sometimes

THE AURORA BOREALIS.

heightened by the appearance of the Aurora Borealis, of which the beauty and variety cannot be expressed in words. An attempt, however, has been made in the following lines to describe a splendid Aurora which appeared on the 15th of January 1820. These lines are extracted from the poetical contributions to the North Georgian Gazette, already alluded to.

High quivering in the air, as shadows fly,
The Northern Lights adorn the azure sky ;
Dimm'd by superior blaze the stars retire,
And heaven's vast concave gleams with sportive fire.
Soft blazing in the east, the orange hue,
The crimson, purple, and ethereal blue,
Form a rich arch, by floating clouds upheld
High poised in air, with awful mystery swell'd.
From whose dark centres, with unceasing roll
Rich coruscations gild the glowing Pole.
Their varied hues, slow waving o'er the bay,
Eclipse the splendour of the dawning day;
Streamers in quick succession o'er the sky
From the Arc's centre far diverging fly ;
Pencils of rays, pure as the heavens' own light,
Dart rapid upward to the zenith's height.

Christmas-day was celebrated in the best manner which circumstances would permit. Divine service was performed on board the ships, after which the men sat down to a Christmas-dinner, the allowance of fresh meat having been increased, as also the grog, that the men might drink the health of their friends at home. "The officers also met at a social and friendly dinner, and the day passed with much of the same kind of festivity by which it is usually distinguished at home; and to the credit of the men be it spoken, without any of that disorder by which it is too often observed by seamen." A

piece of English roast beef, which formed part of the officer's dinner, had been on board since the preceding May: the cold atmosphere having effectually preserved it without the use of salt.

At the commencement of the new year the first case of scurvy occurred. The gunner of the Hecla was attacked; and as it is uncommon for this disease to appear first among the officers, the cause was diligently inquired into, when it was discovered that the gunner's bedding was in a very damp state, in consequence of the deposit of moisture from the breath in his bed-place. The gunner being supplied with anti-scorbutics soon got well; these consisted principally of preserved vegetable soups, lemon-juice, and sugar, pickles, preserved currants and gooseberries, and spruce beer. And as *fresh* vegetable substances are the best of all remedies for the scurvy Lieutenant Parry began about this time to raise a small quantity of mustard and cress in his cabin, in small shallow boxes filled with mould, and placed along the stove-pipe; by these means, even in the severity of the winter, a crop could generally be obtained at the end of the sixth or seventh day after sowing the seed, which, by keeping several boxes at work,

would give to two or three scorbutic patients nearly an ounce of salad each, daily. The mustard and cress, thus raised, were colourless, on account of being deprived of light; but they seemed to possess the same pungent aromatic taste as if grown under ordinary circumstances.

This precaution of growing a small portion of fresh vegetable matter was the more necessary on account of the loss of lemon-juice in freezing, which burst the bottles containing it. The contents of each bottle being frequently frozen into a solid mass, except a small portion of highly concentrated acid in the centre, which was generally found to have leaked out, so that when the ice was thawed it was little better than water. The vinegar also became frozen in the casks, and lost much of its acidity when thawed.

The 7th of January is described as one of the most severe days to the feelings which had been experienced during the winter. It was with difficulty that the people could pass and repass between the two ships. At noon, the temperature had fallen to 49° below zero; but as the weather was quite calm the officers walked on shore for an hour without inconvenience; the sensation of

cold depending much more on the degree of wind at the time, than on the temperature as indicated by the thermometer. The most intense degree of cold, marked by the spirit thermometer, occurred between the 14th and 15th of February, when, during an interval of fifteen hours and a half of clear and nearly calm weather, a thermometer fixed on a pole between the ships and the shore, never rose above —54°, and was once during that interval as low as —55°. During this intense cold, "not the slightest inconvenience was suffered from exposure to the open air by a person well-clothed, as long as the weather was perfectly calm; but, in walking, against a very light air of wind, a smarting sensation was experienced all over the face, accompanied by a pain in the middle of the forehead, which soon became rather severe." In this cold air the breath of a person at a little distance looked exactly like the smoke of a musket, just fired, and that of a party of men employed upon the ice resembled a thick white cloud. One effect of intense cold produced considerable surprise, and that was the distance at which sounds were heard in the open air. People a mile off could be heard distinctly conversing in a common

tone of voice, and Lieutenant Parry has heard a man singing to himself as he walked along the beach at even a greater distance than this. Another circumstance was also remarkable: the low temperature of the atmosphere often prevented the smoke from rising, and it was carried about two miles from the ships to the great annoyance of persons walking at that distance.

The time when the sun would again appear above the horizon was looked for with no small anxiety. On the 28th of January the weather was clear and fine, and the sky beautifully red to the southward; but the sun could not be seen from the mast-head. At noon, none of the fixed stars could be seen by the naked eye; but the planet Mars was plainly visible. In the evening a beautiful cross was seen about the moon. On the 3rd of February the sun was visible from the Hecla's main-top, the height of which was fifty-one feet above the sea; and on the 7th it was seen above the horizon of the ship's deck. About this period for two hours before and after noon, the sky was painted with orange and lake tints, exceedingly rich and beautiful,and the more welcome from the long absence of the bright orb which produced them.

SINGULAR APPEARANCE OF THE MOON.

As the sun remained each day several hours above the horizon, Lieutenant Parry was anxious to admit daylight into the ship, from which it had been completely excluded for more than four months. The Hecla was fitted with double windows in her stern, the interval between the two sashes being about two feet; and within these

some curtains of baize had been nailed close in the early part of the winter. On endeavouring now to remove the curtains, they were found to be so strongly cemented to the windows by the frozen vapour collected between them, that it was necessary to cut them off in order to open the windows; and from the space between the double sashes were removed more than twelve large buckets full of ice or frozen vapour which had accumulated in the same manner. By this arrangement the light was admitted, but the advantage was more than counterbalanced by the inconvenience of increased cold, which stopped two of the chronometers, and made it impossible for several weeks to sit in the cabin without being warmly wrapped up ; and it was not uncommon for the officers, at this period, to reverse the usual order of things, by throwing off their great coats when they went on deck to warm themselves by exercise, and immediately resuming them on going below.

On the 24th, while the men were running round the decks for exercise, the house on shore, containing a number of the most valuable instruments, was discovered to be on fire. All the officers and men of both ships hastened to extinguish it, and

having with great exertion pulled off the roof with ropes and knocked down a part of the sides, snow was thrown upon the flames, and the fire was put out before it had done much damage. "The appearance which our faces presented at the fire was a curious one, almost every nose and cheek having become quite white with frost bites in five minutes after being exposed to the weather; so that it was deemed necessary for the medical gentlemen, together with some others, appointed to assist them, to go constantly round while the men were working at the fire, and to rub with snow the parts affected, in order to restore animation." Many of the men, however, suffered severely from frost-bites; and one man who was in the house when the fire broke out, not having time, or forgetting to put on his gloves, his fingers became in the course of half an hour completely killed by the cold; and being taken on board and having his hands plunged into a basin of cold water, the surface of the water was immediately frozen by the intense cold thus suddenly communicated to it. It was afterwards necessary for this poor fellow to have several of his fingers amputated to prevent mortification.

The month of March brought more temperate weather and with it an annoyance which proceeded from a curious cause. The vapour produced from the men's breath, and from the steam of their victuals during meals, had formed a solid coating of ice inside the ship upon the sides of the lower deck. So long as this continued to be solid, it probably did good by preventing the escape of heat through the ship's sides; but now that the mildness of the weather produced a thaw, it was necessary to scrape off this coating of ice, and in one day, the men removed above one hundred buckets full, each containing from five to six gallons, being the accumulation which had taken place in an interval of less than four weeks.

During the coldest part of the winter, few or no traces of animal life were to be seen upon the island. Even the wolves and foxes had deserted it. At the commencement of winter, when the sun disappeared, the wolves began to approach the ships more boldly, howling piteously on the beach sometimes for hours together; and on one or two occasions coming alongside the ships, when everything was quiet at night. Although these animals were evidently suffering much from

hunger, they never ventured to attack the people. White foxes also visited the ship by night, and one of them was caught in a trap set under the Griper's bows. "The uneasiness displayed by this beautiful little animal during the time of his confinement, whenever he heard the howling of a wolf near the ships, impressed us with an opinion, that the latter is in the habit of hunting the fox as his prey."

As the season advanced, a few animals began to appear. A bird of some kind was seen on the 20th of March: on the 12th of April the ptarmigan was observed, and on the next day the first tracks of rein-deer and musk-oxen were discovered. Several hunting excursions were therefore made, in which the men suffered severely from a painful inflammation in the eyes, called snow-blindness, occasioned by the reflection of intense light from the snow aided by the warmth of the sun. The sensation caused by this complaint exactly resembles that produced by large particles of sand or dust in the eyes. It was cured by means of a cooling wash, and by giving rest to the eyes; and it was prevented by wearing a short veil of black crape attached to the hat; or by wearing

spectacles in which black or green crape had been substituted for the glasses. The game taken in hunting was divided equally among the crew, a preference being shewn only in favour of the sick. An abundance of the herb sorrel was found mixed with moss under the snow; and as the sorrel is a most powerful antidote against scurvy, it was administered to the ships' companies with the happiest results, restoring every one to health.

The month of May had arrived, and the ships were still within their icy prison; they were, however, afloat, the men having cut away the ice from around the ships. On the 24th a smart shower of rain fell, which was regarded as so great a curiosity that every one hastened on deck to witness it. On the last day of May the prospect seen from the summit of a hill in Melville Island, was not such as to encourage hopes of a speedy departure; or of future advance to the westward. "The sea still presented the same unbroken and continuous surface of solid and impenetrable ice, and this ice could not be less than from six to seven feet in thickness, as we knew it to be about the ships. When to this circumstance was added the consideration that scarcely

the slightest symptoms of thawing had yet appeared, and that in three weeks from this period, the sun would again begin to decline to the southward, it must be confessed that the most sanguine and enthusiastic among us had some reason to be staggered in the expectations they had formed of the complete accomplishment of our enterprise."

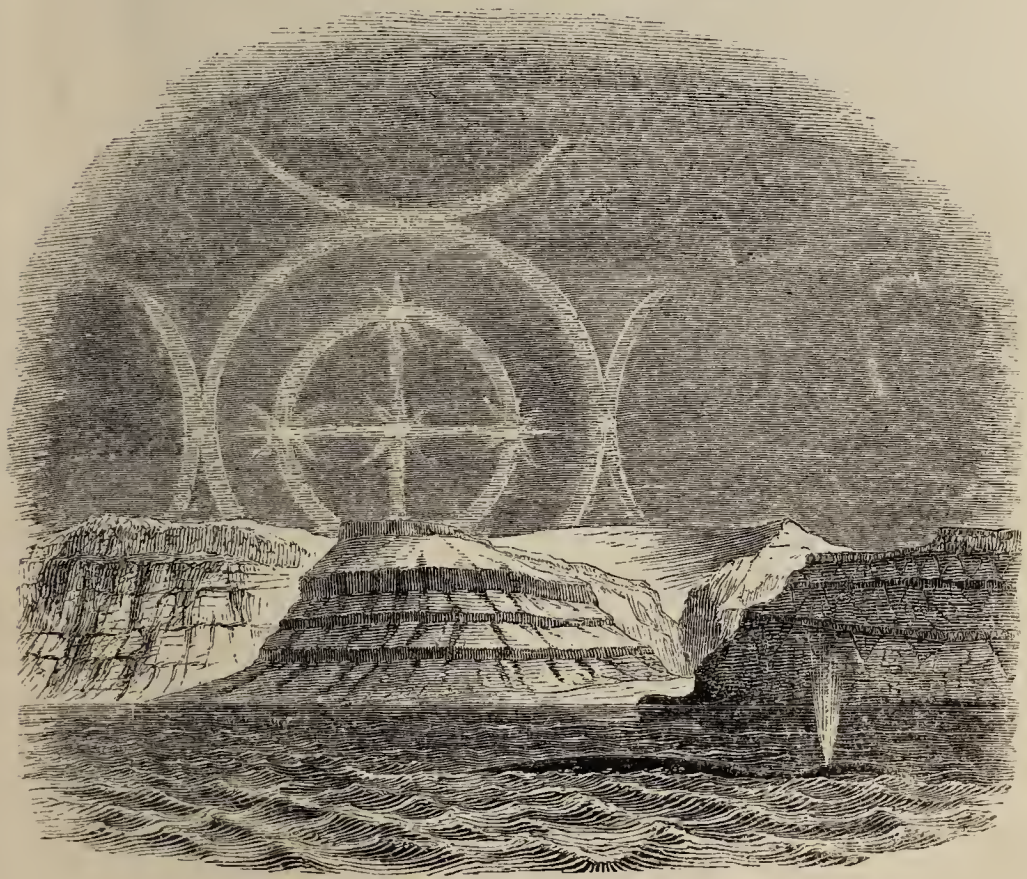
The interval of fine weather, which occurred before the breaking up of the ice, was employed by Lieutenant Parry and a small party in an excursion across the island. The ground was mostly covered with snow, and the cleared tracts were very desolate, with occasional patches of fine verdure. On the western side of the island they found one of the pleasantest and most habitable spots yet seen in the Arctic Regions, the vegetation being more abundant and forward than in any other place, and the situation sheltered and favourable for game. There was a good deal of moss, grass, dwarf-willow, and saxifrage, and even a ranunculus in full flower. Deer were seen crossing the plains in considerable numbers. A musk-ox was also noticed, and the birds were more numerous. The party returned to the ships by the 15th with apparently renewed health.

By the middle of June the thaw had advanced rapidly; the water flowing in streams and torrents, which interfered with hunting and travelling; but throughout this and the succeeding month the great body of ice in the surrounding sea remained entire, and kept the ships in harbour. On the 17th of July the temperature rose to 60°, the highest that was observed in Melville Island; but it was painful to observe that before the end of this month tokens of winter again began to appear; the temperature seldom reached 40° by day; there were frequent falls of sleet and snow, and the pools of water were frozen over by night.

On the 2nd of August the whole mass of ice, by one of those sudden movements to which it is liable, broke up and floated out of the harbour, and the two ships quitted Winter Harbour after having passed ten whole months and a part of September and August in that icy prison. After encountering some difficulty and danger, they reached the spot where their progress had been arrested a year before. They proceeded a short distance to the westward; but the icy barriers became more and more fixed and impenetrable,

and no limit appeared to them, when viewed from the lofty heights which bordered the coast. A brisk easterly gale produced no movement in this frozen surface, and they were therefore inclined to believe that on the other side there must be a barrier of land which kept the ice fixed. As the first half of the navigable season had passed in these fruitless attempts to proceed, it was judged prudent to employ the other half in extricating the ships. Therefore on the 26th August the ships' heads were turned to the eastward, and on the next morning they passed Melville Island in an open channel not less than ten miles wide. We need not follow our hardy navigators in their voyage homewards. It will be sufficient to say that their return to England was hailed with joy. The expedition had sailed upwards of thirty degrees of longitude, beyond the point gained by any former navigator; many new lands, islands, and bays had been discovered; the existence of a Polar Sea to the north of America had been established; the long Arctic winter had been passed, not only without much suffering, but taken as a whole with positive enjoyment; and lastly, to use the words of Lieutenant Parry himself, "I had the happiness

of seeing every officer and man on board both ships (with only one exception out of ninety-four persons) return to their native country, in as robust health as when they left it, after an absence of nearly eighteen months, during which time we had been living entirely on our own resources."



MOCK SUNS.

The scene is the coast of Barrow's Strait.

ESQUIMAUX BUILDING SNOW-HUTS. (SEE PAGE 173.)

PART III.

WINTER IN A SNOW-HUT.—THE ESQUIMAUX OF WINTER ISLAND.

In proceeding to give a brief account of the method in which the natives of these gloomy regions pass the winter, advantage has been taken of the information collected by Captain Parry and Captain Lyon, during a second voyage which had been promoted by the brilliant geographical discoveries of the first. Two ships were fitted out for the purpose, one of which, the *Fury*, was commanded by Parry, now promoted to the rank of Captain; while the other ship, the *Hecla*, was commanded by Captain Lyon. It is not intended to trace the progress of this voyage, the principal object of which was the discovery of the north-west passage, sought, however, on this occasion in a much lower latitude than that in which the ships had wintered in the former voyage. It may be

stated, however, that in Hudson's Bay, the great sounds of the Welcome and of Fox's Channel, had not been traced to a termination, and it was thought that the much desired passage might be found by exploring in this direction. The expedition sailed in May 1821; and having passed a short but busy season in exploring some of the intricate north-western sounds of Hudson's Bay, which were found to be completely inclosed by land, and having traced a considerable portion of the coast before unexplored, winter overtook them. Snow had been falling during the whole of their brief summer; but it melted as it fell. Now, however, it succeeded in covering land and sea with its cold white mantle; and the frost further bound and secured it. The surface of the sea became rapidly covered with soft or pancake ice, which, at first scarcely impeded the motion of the vessel; but as this soft ice became consolidated, the vessels became fixed. At the same time the various masses of drift ice in the sea out of the bay became cemented into one great field that threatened every moment to bear down upon the vessels and dash them in pieces. Fearful of being permanently detached from the land, they de-

termined to saw into the heart of a large adjoining floe, and there take up their winter quarters. "The average thickness of the new floe was already three inches and a quarter; but being in some places much less, several officers and men fell in, and from the difficulty of getting a firm place to rest on, narrowly escaped a more serious inconvenience than a thorough wetting. The whole sheet of ice, even in those parts which easily bore a man's weight, had a waving motion under the feet, like that of leather or any other tough flexible substance set afloat, a property which is, I believe, peculiar to salt-water ice."

Being now frozen up for another winter, Captain Parry with his former skill and judgment, now improved by experience, made such arrangements as would be likely to maintain among the crews that degree of cheerfulness upon which their health materially depended. The plans which had been found successful on the previous occasion were resorted to on this, but they were now carried out more perfectly and efficiently; new sources of amusement were also introduced, but none was so important as that which combined amusement and instruction; this was the esta-

blishment of a school for the instruction of such of the men as were willing to take advantage of this opportunity of learning to read and write, or of improving in these acquirements. The same plan was adopted on board the Hecla. "Tables were set up for the purpose in the midship part of the lower deck; some of the men, already thus qualified, undertook the task of assisting in the instruction of their shipmates; and thus were about twenty individuals belonging to each ship occupied every evening, from six to eight o'clock. I made a point of visiting the school occasionally during the winter, by way of encouraging the men in this praiseworthy occupation; and I can safely say, that I have seldom experienced feelings of higher gratification than on this rare and interesting sight." "And well might he be gratified," says Sir John Barrow,* in quoting the above passage, "for we are assurred by him, on the return of the ships to England, that 'every man on board could read his Bible.'"

Another interesting circumstance also deserves

* Sir John Barrow has recently published an excellent epitome of the "Voyages of Discovery and Research within the Arctic Regions, from the year 1818 to the present time."

to be noticed here. Both ships' companies were united on board the Fury in the performance of divine service. "Our lower deck afforded abundance of accommodation in this respect; some psalm tunes, which had been purposely set upon an organ, were played at the proper intervals of the service, and our little church formed a pleasing and interesting scene to such as are disposed to be interested by scenes of this nature."

The winter was further agreeably relieved by a source of amusement which most unexpectedly presented itself. On the morning of the 1st of February a number of strange people were seen advancing over the ice towards the ships. On looking at them through a glass they were seen to be Esquimaux, and some appearance of huts was also discovered on shore at the distance of two miles from the ships. Captain Parry and Captain Lyon, accompanied by four officers, immediately set out to meet the natives, who, to the number of five-and-twenty, were drawn up in a line abreast and still advancing slowly. Parry and his party walked behind each other in order to make their number appear small, lest they should alarm the natives, who soon halted and

formed into a line, silently stroking their breasts by way of salutation; and in this position they stood still until the officers joined them. They were very quiet and orderly in their behaviour, and were furnished with only a few skins and blades of whalebone, which they had brought either as a peace offering or for barter, and which were immediately purchased for a few small nails and beads. "Some of the women, of whom there were three or four as well as two children in this party, having handsome clothes on, which attracted our attention, they began, to our utter astonishment and consternation, to strip, though the thermometer stood at 23° below zero. We soon found, however, that there was nothing so dreadful in this as we at first imagined, every individual among them having on a complete double suit. The whole were of deer-skin, and looked both clean and comfortable."

The whole party then moved towards the Esquimaux village, the natives being much amused on the way by a large Newfoundland dog, which had been taught to fetch and carry — a qualification which seemed to excite the utmost astonishment; and the children could scarcely

contain themselves for joy. When within a few hundred yards of the huts, the Esquimaux ran forward to tie up their dogs, lest the presence of the strangers should frighten them away. The sight of the Esquimaux village was calculated to produce the greatest surprise in the visiters. "When it is remembered," says Parry, "that these habitations were fully within sight of the ships, and how many eyes were continually on the look-out among us for anything that could afford variety or interest in our present situation, our surprise may in some degree be imagined at finding an establishment of five huts, with canoes, sledges, dogs, and above sixty men, women, and children, as regularly and to all appearance as permanently fixed, as if they had occupied the same spot for the whole winter. If the first view of the exterior of this little village was such as to create astonishment, that feeling was in no small degree heightened, on accepting the invitation soon given us, to enter these extraordinary houses, in the construction of which we observed that not a single material was used but snow and ice. After creeping through two low passages, having each its arched door-way, we came to a small

circular apartment, of which the roof was a perfect arched dome. From this three doorways, also arched and of larger dimensions than the outer ones, led into as many inhabited apartments, one on each side, and the other facing us as we entered. The interior of these presented a scene no less novel than interesting. The women were seated on the beds at the sides of the huts, each having her little fire-place or lamp, with all her domestic utensils about her; the children crept behind their mothers, and the dogs, except the female ones, which were indulged with a part of the beds, slunk out past us in dismay." The natives were evidently in their best apparel, and made a very neat appearance; the darkness of their deer-skin dresses affording a strong contrast to the brilliancy of their habitations. Their behaviour was in the highest degree orderly, respectful, and good-humoured. They eagerly received the knives, nails, needles, and other articles given to them, either by way of barter, or as presents; but they did not importune their visiters for presents, as the noisy natives of Hudson's Straits are accustomed to do. They also differed from these people in being remarkably honest.

"If we dropped a glove or a handkerchief without knowing it, they would immediately direct our attention to it by pointing; and if the owner had left the hut before they discovered it, would run out after him to return it."

After remaining a couple of hours with them, Parry and his party returned to the ships accompanied by about fifty of the natives of both sexes. They expressed much less surprise and curiosity than might have been expected on their first visit; but they soon had an opportunity of showing their fondness for merriment, for on Captain Lyon ordering his fiddler up on the Hecla's deck, they danced with the men for an hour, and then returned in high glee and good humour to their huts. An old man who did not join in the dancing accompanied Captain Lyon to his cabin, where he behaved with great decorum, and neither asked for nor expected a present. "A small hand-organ afforded him a great treat, and he listened to it with such an expression of pleasure on his countenance, as would be shown by a lover of music on hearing the performance of an orchestra; breathing gently, making no noise, and unconsciously opening his mouth. A musical snuff-box succeed-

ed this instrument and underwent a very strict examination; during which my visiter repeatedly uttered a faint but highly expressive cry of pleasure. Drawings of the Esquimaux in Hudson's Strait surprised him much; but he immediately understood them, and pointed out many parts of their dress, which differed from that of his own tribe. The sketch of a bear we had killed in the summer was hailed by a loud outcry, and he instantly uncovered his arm to show three very extensive wounds made by one of these animals, which he had killed." The next day Parry and a large party paid a visit of several hours to the snow village, and laid the foundation of that perfect confidence and good understanding, which, with little or no interruption, continued during the remainder of the winter.

A few days afterwards a number of Esquimaux coming to the ships, they were requested to go through the process of building a snow hut for the amusement and information of the ships' companies. From the quickness with which this was completed, the surprise of the crew at the sudden appearance of the snow village ceased; as it was seen that two or three hours would be more

than sufficient for the purpose. The men seemed to take no small pride in shewing in how expeditious and workman-like a manner they can perform their work; and the women assisted them with great cheerfulness. The work is commenced by cutting from a drift of hard and compact snow a number of oblong slabs, six or seven inches thick and about two feet in length, and laying them edgeways on a level spot, also covered with snow, in a circular form, and of a diameter from eight to fifteen feet, according to the number of occupants the hut is to contain. Upon this, as a foundation, is laid a second tier of the same kind, but with the pieces inclining a little inwards, and made to fit closely to the lower slabs and to each other, by running a knife along the under part and sides. The top of this tier is now prepared for the reception of a third by squaring it off smoothly with a knife, all which is dexterously performed by one man standing within the circle and receiving the blocks of snow from those employed in cutting them without.* When the wall has been raised to a height of four or five feet it leans so much inward as to appear as if about to tumble every

* See Frontispiece to Part III. p. 126.

moment; but the workmen still fearlessly lay their blocks of snow upon it, until it is too high any longer to furnish the materials to the builder in this manner. Of this he gives notice by cutting a hole close to the ground, in that part where the door is intended to be, which is near the south side, and through this the snow is now passed. Thus they continue till they have brought the sides nearly to meet in a perfect and well constructed dome, sometimes nine or ten feet high in the centre; and this they take considerable care in finishing, by fitting the last block or key-stone very nicely in the centre, dropping it into its place from the outside, though it is still done by the man within. The people on the outside are in the mean time occupied in throwing up snow with the snow shovel, and in stuffing in little wedges of snow where holes have been accidentally left.

The builder then proceeds to let himself out by enlarging the proposed door-way into the form of a Gothic arch, three feet high and two feet and a half wide at the bottom, communicating with which they construct two passages, each from ten to twelve feet long, and from four to five feet in height, the lowest being that next the hut.

ENTRANCE TO SNOW-HUT.

The roofs of these passages are sometimes arched, but more generally made flat by slabs laid on horizontally. In first digging the snow for building the hut, they take it principally from the part where the passages are to be made, which purposely brings the floor of the latter considerably lower than that of the hut, but in no part do they dig till the bare ground appears.

The work just described completes the walls of a hut, if a single apartment only be required; but if several families are to reside under one roof,

the passages are made common to all, and the first apartment forms a kind of ante-chamber, connected by an arched door-way with the inhabited apartments. When there are three of these, which is generally the case, the whole building with its adjacent passages, forms a tolerably regular cross.

Light is admitted into the huts through a circular plate of ice, three or four inches thick, and two feet in diameter, neatly let into a round hole cut on one side of the roof of each apartment. The light is soft and pleasant, like that transmitted through ground glass, tinted with the most delicate hues of verdigris, green and blue, according to the thickness of the slab through which it passes, and is quite sufficient for every purpose. When the snow-huts are built on the ice, which is sometimes the case, the interior, soon after their completion, is peculiarly beautiful, for the ice being cleared of snow presents a flooring of that splendid blue, which is perhaps one of the richest colours that nature affords. When these edifices have been completed some time and are surrounded by snow-drift, it is only by the windows that they can be recognised as human habita-

tions; by night their external appearance is very singular, when they discover themselves only by a circular disk of light transmitted through the windows from the lamps within.

Seats and couches within the huts are formed of the same abundant material as the hut itself. A bank of snow, two and a half feet high, is raised all round the interior of each apartment except on the side next the door. The beds are arranged by first covering the snow with a quantity of small stones, over which are laid paddles, tent poles, and some blades of whalebone; above these a number of little pieces of net work, made of thin slips of whalebone, and lastly a quantity of birch and other twigs. Their numerous deer-skins can now be spread without risk of their touching the snow, and Captain Parry, speaking from his own experience, assures us that such a bed in a snow hut is capable of affording not merely comfort, but luxurious repose, in spite of the rigour of the climate. On a subsequent occasion, Captain Lyon noticed that the snow huts of another tribe were all neatly lined with seals' skins, so sewed as exactly to fit the dome-shaped roofs.

That portion of the bank which is opposite the door is used as a *fire-place*, the passage up to it being three or four feet wide. The fire consists of a single lamp, or shallow crescent-shaped vessel of pot-stone.* The wick, composed of dry moss, rubbed between the hands till it is quite inflammable, is disposed along the edge of the lamp on the straight side, and a greater or smaller quantity lighted according to the heat required, or the fuel that can be afforded. When the whole length of this, which is sometimes above eighteen inches, is kindled, it affords a most brilliant and beautiful light without any perceptible smoke, or any offensive smell. The lamp is made to supply itself with oil, by suspending a long thin slice of whale, seal, or sea-horse blubber near the flame, the warmth of which causes the oil to drip into the vessel until the whole is extracted. The wick is trimmed by a piece of asbestos, stone or wood, and a quantity of moss is kept near at hand to supply the wick. Immediately over the lamp is fixed a rude frame-work of wood, from which the pots are suspended, and serving also to sustain a large hoop of bone, having a net stretched

* *Lapis ollaris.* It is also called *soap-stone*, from its soapy feel.

tight within it. This contrivance is intended for the reception of any wet things, and is usually loaded with boots, shoes, and mittens. The families which occupy the same hut are always closely related to each other, but there is always a separate lamp for each family.

When all the lamps are lighted, and the hut is full of people and dogs, a thermometer placed on the net over the fire shewed a temperature of 38°; when removed two or three feet from this situation it fell to 31°, and placed close to the wall stood at 23°; the temperature of the open air at the time being 25° below zero: so that if we take the mean temperature of the hut to be 31° it will be seen that, at the time of the observation, there was a difference of fifty-six degrees between the temperature of the inside and the outside of the hut. A greater degree of warmth than this within the hut produces extreme inconvenience, by the thawing and dropping from the roofs. This they remedy for a time by applying a little piece of snow to the place from which a drop proceeds; but for several weeks in the spring, when the weather is too warm for these edifices, and still too cold for tents, the

people suffer much on this account; the thawing being often such as to wet their clothes and bedding, so that they become affected with violent colds and coughs. They endeavour to remedy the evil by making certain alterations in these curious dwelling-places, either by building the former apartments two or three feet higher, or adding others, that they may be less crowded. In building a higher hut they construct it over, and as it were concentric with the old one, which is then removed from within. It is curious, remarks Parry, to consider that in all these alterations the object kept in view was *coolness*, and this in houses formed of snow! On one of his visits, the external appearance of the huts was as much changed as the interior, for so much drift had collected about the huts that it was difficult to trace any resemblance to the original village. The snow was as high as the roofs on every side, so that one might walk completely over them, and but for the round plates of ice composing the windows, without suspecting the little hive of human beings that was so comfortably established below. It was not, however, always safe to walk over the roofs, for the thawing would some-

times so weaken them that a leg might make its way through and discover in what parts repairs were becoming necessary.

The Esquimaux sometimes employ slabs of ice for the walls of their huts, cementing them together with snow and water. The light and transparent effect within these singular habitations, gives one the idea of being in a house of ground-glass, and when new they look clean, comfortable, and wholesome. Kennels for the dogs are also made of the same abundant material; four upright slabs of ice being covered with a fifth, and having a small hole as a door in one of the sides. In these ingenious kennels the dogs look as if they were enshrined in a glass-case. Wolves are also caught in traps formed of heavy slabs of solid ice, having a ponderous door or portcullis of the same material sliding in a groove. This falling door is kept up by means of a string passing along the top of the structure, and carried through a hole at the farthest end, where it is fastened to a hoop of whalebone, which carries a piece of flesh as the bait, and is slightly hooked under a projecting piece of ice, so that when the wolf pulls the meat the hoop gets clear, and the door falls

in an instant. The trap is so low and narrow as to prevent the imprisoned animal from escaping, so that he can easily be killed as he lies. Another kind of trap is used for foxes; it is like a small lime-kiln in form, having a hole near the top within which the bait is placed, and the foxes are obliged to advance to it over a piece of whalebone, which, bending beneath their weight, lets them into prison, and then resumes its former position. Slabs of ice are also set up like tall tomb-stones, for the purpose of holding the skin-covered canoes, thus placing them beyond the reach of the ravenous fangs of the dogs and wolves. On one occasion Parry noticed a quantity of spare slabs lying about in different places, giving the ground an appearance like that of a stone yard.

The interior of the snow huts, immediately after their completion, is described as being extremely beautiful: this beauty, however, soon becomes sadly dimmed by use. The roofs get blackened by the smoke of the lamps, and the warmth gives to the walls a glazed and honeycombed surface, and makes them much thinner. The snow, also, on which the lamps stand, wears away, so as to destroy the regularity of the

original plan of construction. To these changes may be added that of a vast quantity of blood and oil defacing the purity of the snowy-floor, and sending out a most disagreeable odour.

Various domestic utensils are employed by the Esquimaux. The pots used for cooking are hollowed out of solid stone; they are of an oblong form, wider at the top than at the bottom. Each pot is suspended by a line of sinew at each end to the frame-work over the fire, and thus becomes so black that the original colour of the stone cannot be seen. They also make various circular and oval vessels of whalebone; ivory knives of the tusk of the walrus, and a number of small vessels of skin sewed neatly together; a large basket of the same material is also to be seen in every apartment. Their drinking-cups are made of the thick root of the horn of the musk-ox. Of the same material they make very good spoons; they also make marrow-spoons out of long narrow hollowed pieces of bone, of which every housewife has a bunch of half-a-dozen or more tied together, and generally attached to her needle-case.*

* Captain Parry noticed in the Esquimaux huts some large copper

The Esquimaux obtain fire by means of two lumps of common iron pyrites, from which sparks are struck into a little leathern case, containing moss well-dried, and rubbed between the hands. If this tinder does not readily catch, a small quantity of the white floss of the seed of the ground willow is laid above the moss. As soon as a spark has caught, it is generally blown till the fire has spread an inch around, when the pointed end of a piece of oiled wick being applied, it soon bursts into a flame, the whole process having occupied perhaps two or three minutes.

The food of the Esquimaux is abundant in summer, and consists principally of the rein-deer, the musk-ox, the whale, the walrus, the seal, and the salmon. In winter they can procure only the walrus and small seal, and these not always in sufficient quantity for their subsistence. When on his first acquaintance with these people, Captain Parry noticed the very small quantity of food which they had in their huts, he supposed that they had left some of their provision behind, and

kettles, knives, and other articles of European manufacture, which had probably been obtained through the medium of the Hudson's Bay Company's factories.

THE WALRUS AND THE SEAL.

that they would return for it as occasion demanded; but he soon found that even in the severest weather they depended for food entirely upon their daily exertions, preferring, of course, to winter near those seas which are not continually frost bound.

But the exertions of the hunters are not always successful. They are sometimes exposed for hours together on the ice at a temperature of from 18° to 22° below zero, without taking a single seal, on which occasions the village has a very desolate appearance; for as these people never think of providing against such a calamity by keeping a store of provisions, the failure of their seal fishery deprives them of food and fuel for their lamps. And they are not only deprived of warmth and light in their huts, but they are also destitute of the means of melting snow for water, of which they drink an enormous quantity; and they can, therefore, only quench their thirst by eating the snow, which is a comfortless and ineffectual resource.

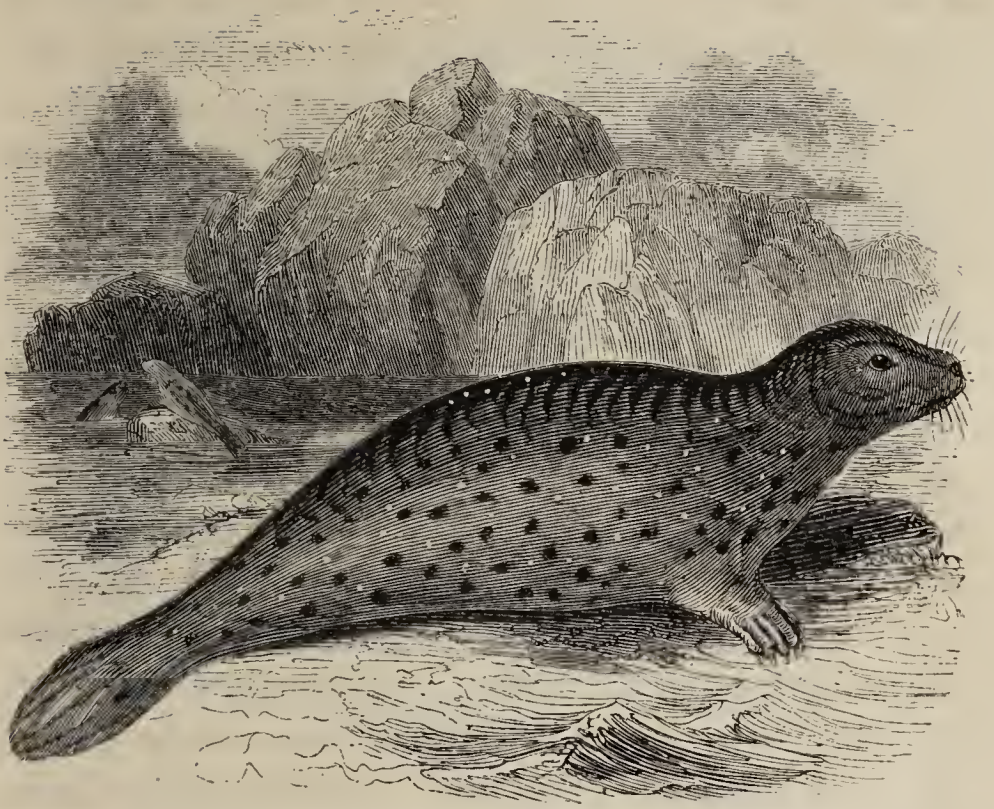
After such a privation how joyful is the news of the hunter's success. All the women hurry to the door of the huts, and the children rush to the beach to meet the men dragging along the prize; and on one occasion one of the children, as if to complete the triumphant exultation with which the event was hailed, threw himself on the animal, and clinging fast to it, was thus dragged to the huts. Every woman was observed to bring

her cooking-pot to the hut where the seal was dissected, for the purpose of receiving a share of the meat and blubber.

Captain Parry once entered a hut while two of the women were cutting up a seal which had just been caught. They were armed with large knives, and their hands and faces soon became besmeared with blood; while delight and exultation were depicted on their countenances. But before a knife was put into the animal, as it lay on its back, they poured a little water into its mouth, and touched each flipper and the middle of the belly with a little lamp-black and oil taken from the under part of the lamp. The object of this ceremony could not be ascertained. The women then laid open the intestines, which, being taken out and all the blood carefully baled up and put into the cooking-pot over the fire, they separated the head and flipper from the carcass, and then divided the ribs. All loose scraps were put into the pot for immediate use, except such as the two butchers now and then crammed into their mouths, or distributed to the numerous and eager bystanders for still more immediate consumption. Of these morsels the children

came in for no small share, every little urchin that could find its way to the slaughterhouse running eagerly in and between the legs of the men and women, presenting its mouth for a large lump of raw flesh, just as an English child of the same age might do for a piece of sugar-candy. Every now and then also, a dog would make his way towards the reeking carcass, and when in the act of seizing upon some delicate part, was sent off yelping by a heavy blow with the handles of the knives. When all the flesh is disposed of, the blubber still remains attached to the skin, from which it is separated the last: the two parts of the hide are then rolled up and laid by, together with the store of flesh and blubber. During the dissection of a seal, they have a curious custom of sticking a thin filament of skin, or of some part of the intestines, upon the foreheads of the boys, who are themselves extremely fond of it, it being intended to make them fortunate seal catchers.

The seals caught by the Esquimaux during the winter are of two kinds, the small seal (*Phoca hispida*), and the large seal, (*Phoca barbata*). The seal is a very wary animal, passing much of its time in the water in the pursuit of its prey, and it has



THE COMMON SEAL (*Phoca vitulina*).

the power of inhaling a sufficient quantity of air to serve for a long period; when it requires a fresh supply of air, it either comes to the surface at the edge of the ice-floe, or it forces a passage through the ice, producing a rising on the level surface of the snow not larger than a common mole-hill, and of much the same shape. Captain

Parry describes a party of seal hunters, seven in number, proceeding towards the edge of the floe to look for seals. They dispersed themselves in a single line so as to make as small an appearance as possible, in the direction in which they were going, and in this manner crept very cautiously towards the margin of the floe. Suddenly, they all stooped down quite low to hide themselves, and continued thus a quarter of an hour, during which time they prepared their lines and spears; and then when the animal appeared to be intercepted from their view, again took the opportunity of gaining a few paces upon him in the same cautious manner as before. When they had been thus occupied for a full hour, alternately creeping and stooping down, the seal which had been lying on the ice took the water, and they then gave up their chase. If a man in listening for seals has any reason to suppose that a seal is at work beneath, he immediately attaches himself to the place, and seldom leaves it till he has succeeded in killing the animal. For this purpose, he first builds a snow-wall about four feet in height to shelter him from the wind, and seating himself under the lee of it, deposits his spear,

ESQUIMAUX WATCHING A SEAL-HOLE.

lines, and other implements upon several little forked sticks inserted into the snow, to prevent the smallest noise being made in moving them when wanted. But the most curious precaution consists in tying his own knees together, with a thong, so as to prevent any rustling of his clothes, which might otherwise alarm the animal. In this situation a man will sit quietly for ten or twelve hours together, at a temperature of 30 or 40 de-

grees below zero, attentively listening to any noise made by the seal; sometimes using a little instrument to ascertain whether the animal is still at work below. This instrument is merely a slender rod of bone, nicely rounded, and having a point at one end and a knob, or else a cross piece at the other. The rod is sometimes made as delicate as a fine wire that the seal may not see it. It is thrust through the ice where the seal is supposed to be at work underneath, and the part which still remains above the surface informs the hunter by its motion, whether the animal is employed in making his hole: if not, it remains undisturbed, and the attempt is given up in that place. But, supposing all goes on well, and the hole is nearly completed, the hunter cautiously lifts his spear with its line attached; and as soon as the blowing of the seal is distinctly heard, and the ice consequently very thin, he drives it into him with the force of both arms, and then cuts away the remaining crust of ice to enable him to repeat the wounds and get him out. Boys of fourteen or fifteen consider themselves equal to the killing of a small seal; but it requires a strong man to master the large seal, or the walrus, for

he has to pass the line round his leg or arm, and in the case of the walrus, round his body, his feet being at the same time firmly set against a hummock of ice, in which position these people can hold against a very heavy strain.

THE WALRUS IN OPEN WATER.

The hunting of the walrus is a more difficult undertaking than that of the seal. They attack the walrus in open water with large spears, fur-

nished with lines and inflated seal-skins; the latter serving to impede the diving of the animal, and also to prevent the weapons from being lost. They are careful to throw the spear from a distance, lest the animal should attack the canoe and demolish it with his tusks. Sometimes the hunters go out a considerable way to sea upon floating and detached masses of ice; and Captain Parry says that it was impossible not to admire the fearlessness, as well as dexterity with which the Esquimaux invariably pursued their game.

One night Captain Parry and a small party visited the huts with the intention of remaining there till morning. The men were out hunting the walrus, and the night proved very thick with small snow, and as disagreeable and dangerous for people adrift upon floating ice as can well be imagined. The women amused their visiters with a tedious song, which they had often before heard, but which was now somewhat modified by their insisting that their guests should take turns in the performance, all which excited the greatest merriment and laughter. Neither their want of food and fuel, nor the uncertain prospect of ob-

THE WALRUS.

taining any that night, were sufficient to deprive them of their cheerfulness and good-humour. The singing was, however, suddenly interrupted by an announcement from one of the children that the men had killed something on the ice. An hour after a man arrived with the positive intelligence that two walruses had been taken and brought

with him as large a portion of walrus flesh as he could drag over the snow. A shout of joy re-echoed through the village, and the women ran into each other's huts to communicate the welcome intelligence, and actually hugged one another for joy. They then got a supply of blubber from the portion just brought in, sufficient to set all their lamps alight, and to furnish a few scraps of meat to the children and themselves. From this time, which was nine o'clock, till past midnight, fresh cargoes were continually arriving; the dogs bringing in the principal portion on sledges. "Every lamp now swimming with oil, the huts exhibited a blaze of light; and never was there a scene of more joyous festivity than while the operation of cutting up the walruses continued. I took the opportunity, which their present good-humour afforded, to obtain a perfect head and tusks of one of these animals, which we had not been able to do before; and, indeed, so much were their hearts opened by the scene of abundance before them, that I believe they would have given us anything we asked for. This disposition was considerably increased also by their taking it into their head, that their success was in some way or

other connected with, or even owing to, our having taken up our night's lodging at the huts." On the next day it was pleasing to notice that even in the midst of plenty, they did not give themselves up to feasting and repose; for the men were out early to renew their labours on the ice, and take advantage of every favourable opportunity of increasing their store. "It is certain, indeed, that were these people more provident, (or, in other words, less gluttonous, for they do not waste much,) they might never know what it is to want provisions, even during the most inclement part of the year."

Perhaps in no part of the world is the value of the dog as the faithful servant of man more conspicuously shown than in these icy regions. They assist their masters by their excellent scent in finding the seal-holes; they chase the deer, and will attack the bear and any other animal, except the wolf, of which the greater part of them seem to have an instinctive dread. These dogs are also used as beasts of draught, carrying heavy burdens on sledges over the fields of ice and snow with great rapidity.

The Esquimaux dogs, in the form of their bo-

THE ESQUIMAUX DOG.

dies, their short pricked ears, thick furry coat, and bushy tail, so nearly resemble the wolf, especially when of a light or brindled colour, that they may easily be mistaken for that animal. The wolf, however, may be distinguished by his always keeping his head down, and his tail between his legs in running, while the dogs almost always carry their tails handsomely curled over the back. In winter

the dogs are covered with hair three or four inches long; and besides this, nature furnishes them during this severe season with a thick under coating of close soft wool, which they begin to cast in the spring. Thus protected, they can withstand the severest cold, and require nothing but a shelter from the wind to make them comfortable. There is generally much snarling and fighting among them; but when caressed and well fed, they become quite familiar and domestic, but do not work so well, on which account it is, perhaps, that their masters treat them so roughly, inflicting on them the most unmerciful blows, feeding them badly or not at all; for when food is scarce they leave them to lick up the snow, or to rake about in it for whatever tough or filthy substances they can find for their subsistence. And yet, in spite of all this bad treatment, the dogs are very much attached to their masters, as they show after a short absence by jumping up and licking their faces all over with extreme delight. The dogs all have names, to which they readily attend, whether drawing in a sledge, or otherwise; and these names are sometimes given after the relations of their masters. To prevent them from straying to any

distance, one of the forelegs is sometimes tied up to the neck, so that an attempt to run immediately throws the animal down.

The ill usage bestowed upon these valuable creatures is, however, relaxed in the case of the bitches, which in winter are allowed a portion of the bed in the huts, where they are carefully attended and fed by the women, who will even supply the young ones with meat and water from their mouths, as they do their own children, and sometimes also carry them in their hoods to take care of them. Captain Parry thinks it probable that this is the reason why the dogs are always so much attached to the women, who can at any time catch them, or entice them from the huts when the men fail in doing so. So also with heavy loads, the dogs draw best when a woman is walking a little way a-head; and in such a case they are sometimes enticed to mend their pace by her holding a mitten to her mouth, and then making a motion of cutting it with a knife, and throwing it on the snow, when the dogs, mistaking it for meat, hasten forward to pick it up.

The sledges of the Esquimaux are of large size, varying from six and a half to nine and even

eleven feet in length, and from eighteen inches to two feet in breadth. The runners are sometimes made of the right and left jaw-bones of a whale, but more commonly of several pieces of wood or bone lashed together, the interstices being filled up with moss, and then cemented by throwing water to freeze upon it. The lower part of the runner is shod with a plate of harder bone, coated with fresh water ice, to make it run smoothly, and to avoid wear and tear, both which purposes are thus completely answered. This coating is made with a mixture of snow and fresh water, about half an inch thick, rubbed over till it is quite smooth and hard upon the surface, and this is usually done a few minutes before setting out on a journey. When the ice is only in part worn off, it is renewed by taking some water into the mouth and spirting it over the former coating. Captain Parry remarks that this shoeing of smooth ice, is, for winter use, not inferior to wood and more durable materials.

The dogs are fastened to the sledge by a simple harness of deer or seal skin, going round the neck and fore-legs with a single thong, leading over the back, and attached to the sledge as a

trace. Though they appear at first sight to be huddled together without regard to regularity, there is, in fact, considerable attention paid to their arrangement, particularly in the selection of a dog of peculiar spirit and sagacity, who is allowed, by a longer trace, to precede the rest as leader, and to whom, in turning to the right or left, the driver usually addresses himself. The driver sits quite low on the fore part of the sledge, and is furnished with a whip, the lash of which is many feet in length. The part of the thong next the handle is platted a little way down to stiffen it and give it a spring, on which much of its use depends. The men are very expert in the use of this whip, and with it they can inflict a very severe blow on any dog at pleasure. The whip is not of much use in directing the sledge, for the driver uses certain words to make the dogs turn to the right or left. A good leader is very attentive to these, especially if his own name be repeated at the same time, looking behind over his shoulder, as if listening to the directions of the driver. When the dogs slacken their pace, the sight of a seal or a bird is sufficient to put them instantly on their full speed; and even

if these objects are not to be seen, the cry of "a seal! a bear! a bird!" &c., is enough to give play to the legs and voices of the whole pack. Captain Lyon describes it as a beautiful sight, to observe two sledges racing at full speed to the same object, the dogs and men in full cry, and the vehicles splashing through the holes of water, with the velocity and spirit of rival stage coaches. When there is any track on the ground, however slight, there is no trouble in guiding the dogs; for even in the darkest night, and in the heaviest snow-drift, there is little or no danger of their losing the road, the leader keeping his nose near the ground, and directing the rest with wonderful sagacity. When the driver wishes to stop the sledge, he calls out "Wo, woa," exactly as our carters do; but if the weight is small and the journey homeward, the dogs pay no attention to the command, and the driver is obliged to dig his heels in the snow to stop them; he then lays the whip gently over each dog's head and makes them all lie down; the driver standing all the time on the foremost cross-piece of the sledge, so that should the dogs set off he is thrown upon the sledge instead of being left behind by them. On

a level, hard, smooth surface of snow, six or seven dogs will draw from eight to ten hundred weight at the rate of seven or eight miles an hour, for several hours together, and will easily perform a journey of fifty or sixty miles a day. On untrodden snow five and twenty or thirty miles would be a good day's journey.

Such are a few particulars respecting the Esquimaux during the winter season. It does not belong to our purpose to describe their habits and modes of life in summer, still less to collect anecdotes respecting their natural disposition, and the customs which obtain among them; but it may be interesting to quote a few passages from Captain Parry's general summary of their character, which appears in a very favourable light, when contrasted with that of the American Indian.

"It is true they will recoil with horror at the tale of an Indian massacre, and probably cannot conceive what should induce one set of men deliberately, and without provocation, to murder another. War is not their trade; ferocity forms no part of the disposition of the Esquimaux. Whatever manly qualities they possess are exercised in a different way and put to a far more

worthy purpose. They are fishermen and not warriors; but I cannot call that man a coward who, at the age of one and twenty, will attack a

THE WHITE BEAR.

Polar bear single-handed, or fearlessly commit himself to floating masses of ice, which the next puff of wind may drift for ever from the shore.

"If, in short, they are deficient in some of the higher virtues, as they are called, of savage life, they are certainly free also from some of its blackest vices; and their want of brilliant qualities is fully compensated by those which, while they dazzle less, do more service to society, and more honour to human nature. * * When viewed more nearly in their domestic relations, the comparison will, I believe, be still more in their favour. It is here as a social being, as a husband and the father of a family, promoting within his own little sphere the benefit of that community, in which Providence has cast his lot, that the moral character of a savage is truly to be sought; and who can turn without horror from the Esquimaux, peaceably seated after a day of honest labour with his wife and children in their snow-built hut, to the self-willed and vindictive Indian, wantonly plunging his dagger into the bosom of the helpless woman, whom nature bids him cherish and protect!"

The different families of the tribe appear to live on good terms with each other, though each preserves its own habitation and property quite distinct. "The persons living under one roof, who are generally closely related, maintain a degree

of harmony among themselves, which is scarcely ever disturbed. The more turbulent passions, which, when unrestrained by religious principle, or unchecked by the dread of human punishment, usually create so much havoc in the world, seem to be very seldom excited in the breasts of these people, which renders personal violence or immoderate anger extremely rare among them ; and one may sit in a hut for a whole day, and never witness an angry word or look except in driving out the dogs. If they take offence, it is more common for them to show it by the more quiet method of sulkiness, and this they now and then tried as a matter of experiment with us." On one occasion, when some of the officers were in the hut of one of these people, the owner took offence at something, when turning his back upon his guests, he frequently repeated the expression "good-bye," as a broad hint to them to go away. On another occasion, when one of the natives slept on board the Fury, he offended one of the officers by his sulky behaviour, or at least he thought he had done so ; at all events they parted for the night without any formal reconciliation. The next morning, the officer was awakened at an un-

usually early hour, by the man's entering his cabin and taking hold of his hand to shake it, by way of making up the supposed quarrel. "On a disposition thus naturally charitable," says Captain Parry, "what might not Christian education and Christian principles effect!"

The hospitality of the Esquimaux is spoken of in favourable terms. "Both as to food and accommodation, the best they had were always at our service; and their attention both in kind and degree, was everything that hospitality and even good breeding could dictate. The kindly offices of drying and mending our clothes, cooking our provision, and thawing snow for our drink, were performed by the women with an obliging cheerfulness, which we shall not easily forget, and which commanded its due share of our admiration and esteem. While thus their guest, I have passed an evening not only with comfort but with extreme gratification; for with the women working and singing, their husbands quietly mending their lines, the children playing before the door, and the pot boiling over the blaze of a cheerful lamp, one might well forget for the time, that an Esquimaux hut was the scene of this domestic com-

fort and tranquillity; and I can safely affirm that, while thus lodged beneath their roof, I know no people whom I would more confidently trust, as respects either my person or my property, than the Esquimaux." Although it is painful to consider that much of this kindness is prompted by self-interest, yet no one can contemplate the above picture without sharing in these pleasing emotions, which our distinguished navigator describes so well. There are also other virtues among this rude people, which excite our warmest sympathy; such, for example, as their affection towards their children, which is very great, and shows itself by a thousand playful endearments. Nothing can well exceed their kindness towards them; and the children, on their part, have so much gentleness and docility as to render any kind of chastisement quite unnecessary. "Even from their earliest infancy, they possess that quiet disposition, gentleness of demeanour, and uncommon evenness of temper, for which in more mature age they are for the most part distinguished. Disobedience is scarcely ever known, a word or even a look from a parent is enough; and I never saw a single instance of that frowardness and disposition to mis-

chief, which, with our youth, so often require the whole attention of a parent to watch over and correct. They never cry for trifling accidents, and sometimes not even for very severe hurts, at which an English child would sob for an hour.* * They are just as fond of play as any other young people, and of the same kind; only that while an English child draws a cart of wood, an Esquimaux of the same age has a sledge of whalebone; and for the superb baby-house of the former, the latter builds a miniature hut of snow, and begs a lighted wick from her mother's lamp to illuminate the little dwelling. Their parents make for them, as dolls, little figures of men and women, habited in the true Esquimaux costume, as well as a variety of other toys, many of them having reference to their future occupations in life, such as canoes, spears, and bows and arrows. The drum or tambourine is common among them, and used not only by the children, but by the grown-up people at some of their games. They sometimes serrate the edges of two strips of whalebone, and whirl them round their heads just as boys do in England, to make the same peculiar humming sound. They will dispose one piece of wood

on another as an axis, in such a manner that the wind turns it round like the arms of a windmill; and so of many other toys of the same simple kind." Captain Lyon also gives an equally favourable opinion of the quiet and unobtrusive manners of the Esquimaux children: he was amused at their appearance, their large deer-skin dresses "giving them, when their faces were hidden, the appearance of young bears, wolves, seals, and puppy dogs; they were, however, the picture of health, rosy, fat, and strong, with the finest black eyes imaginable, and a profusion of long jetty hair."

The boys are brought up to habits of industry from an early age. When not more than eight years old, they are taken by their fathers on their seal excursions, where they begin to learn their future business; "and even at that early age they are occasionally intrusted to bring home a sledge and dogs, from a distance of several miles over the ice. At the age of eleven we see a boy with his water-tight boots and mocassins, a spear in his hand, and a small coil of line at his back, accompanying the men to the fishery, under every circumstance; and from this time his services daily increase in value to the whole tribe."

It is indeed painful to think that this amiable, industrious, and peaceful race, do not appear to have any idea of the existence of One Supreme Being; or to have any notions on subjects which can be called religious. Cut off as they are from all communication with the civilized world, there is no present hope of their improvement in this respect; but were an opportunity to occur of carrying the Gospel to their snow-clad land, there is little doubt that the remark of Captain Parry applied to an individual of the tribe, might be used for all its members: —"On dispositions thus naturally charitable, what might not Christian education, and Christian principles effect!"

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